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Journal of the

AMERICAN PHARMACEUTICAL ASSOCIATION

The Logan Bindery, 502 N. Prior Ave., St. Paul, Minn.

Practical Pharmacy Edition

FEATURED IN THIS ISSUE

Twenty-minute procedure for a sparkling aromatic elixir by modified formula (p. 24)

A look backward at a yearful of progress in pharmacy and related fields (p. 20)

What are "reasonable" prescription tolerances? Part 3 of a study on compounding accuracy (p. 26)

Your profession in government services—A symposium on the pharmacist's new status and opportunity (p. 31)

Pharmacy's manpower—What and where are our needs? (p. 18)

A new feature on prescription products (p. 6)

What's happening at headquarters (p. 53)

Problems of the prescription laboratory (p. 48)

An invitation to vacation at the Golden Gate and A. Ph. A.'s convention (p. 17)

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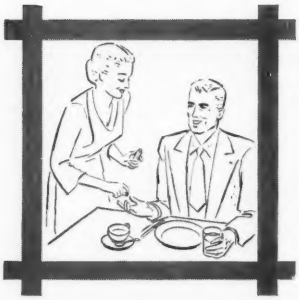
DAYAMIN*...

the multiple vitamin capsule

that multiplies prescription profits



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TO MEMBERS PLANNING TO PRESENT PAPERS BEFORE THE SECTIONS: Members planning to present papers before any Section at the next meeting (San Francisco, August 8–14, 1948) are requested to notify the appropriate Section secretary promptly. Titles and abstracts (not to exceed 250 words) of papers should be submitted by May 1, 1948, and preferably earlier, to assure a place on the program. Send titles and abstracts to the appropriate Section secretary whose address appears in the listing below.

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PUBLISHED by the American Pharmaceutical Association. Publication office: 20th and Northampton Streets, Easton, Pa. Editorial office (and address for all correspondence): 2215 Constitution Ave., N. W., Washington 7, D. C.

ANNUAL SUBSCRIPTION—Journal of the American Pharmaceutical Association, complete (both editions): United States and Pan America $7; Canada $7.70; other foreign $8; members of the American Pharmaceutical Association no dues, $4. Each edition, Scientific Edition or Practical Pharmacy Edition: United States and Pan America $4; Canada $4.35; other foreign $4.50. Single numbers, either edition: United States and Pan America $0.35; Canada $0.40; other foreign $0.50.

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New prescription products

Product descriptions may be clipped and filed on three- by five-inch cards. These are also indexed for quick reference in the "Monthly Drug Index" appearing on the last page of each issue. A product is described in this column for the information of pharmacists who may be asked by physicians to stock the drug, or who may receive professional inquiries about it. A listing does not imply evaluation or recommendation by the Association, nor does omission of any product have any significance concerning its merit.

ADANON HYDROCHLORIDE

Description: Methadon (Amidone) hydrochloride, chemically 6-dimethylamino-4,4-diphenyl-3-heptanone hydrochloride.

Form Supplied: Tablets of 2.5 mg., 5 mg., 7.5 mg. and 10 mg., in bottles of 100 and 500. Elixir, 5 mg. per 5 cc., bottles of 16 fluidounces and 1 gallon. Syrup, 10 mg. per 30 cc., bottles of 16 fluidounces and 1 gallon. Ampuls of 2 cc., 5 mg. per cc. boxed in 10, 25 and 100. Vials of 10 cc., 10 mg. per cc.

Use: Synthetic analgesic intended for relief of pain, particularly intractable pain of malignancy, renal colic and fractures. As an antitussive for controlling cough reflex, especially when indicated in pulmonary tuberculosis. Not for use in obstetrics or preoperatively.

Administration: Orally, intramuscularly and intravenously in doses of 2.5 to 10 mg. May be habit forming. Narcotic blank required.

Source: Winthrop Chemical Co., 170 Varick St., New York 13.

AMINO-VIBEX

Description: A natural enzymatic hydrolysate containing all essential amino acids with vitamin B complex factors and minerals as contained in yeast.

Form Supplied: 12-ounce bottles.

Use: Intended to provide protein nourishment in its simplest form for prevention and treatment of hypoproteinemia resulting from lowered protein intake, increased protein demands, accelerated protein loss or inadequate or faulty protein digestion.

Administration: Orally as indicated.

Source: Parke, Davis & Co., Detroit 32, Mich.

CREMOMERAZINE; CREMODIAZINE

Description: Suspensions of sulfamerazine and of sulfadiazine in fine state of subdivision to promote rapid absorption.

Form supplied: Flavored suspensions in bottles of 16 fluidounces.

Use: Intended for treatment of pneumonia, meningitis and other diseases susceptible to treatment by sulfonamides.

Administration: Orally as indicated.

Source: Sharp & Dohme, Inc., Philadelphia 1, Pa.

DERMESTHETIC OINTMENT

Description: Contains benzyl alcohol, phenol and benzocaine.

Form Supplied: Greaseless ointment.

Use: Intended to provide immediate and prolonged relief from itching of poison oak, poison ivy, industrial rashes and other pruritic conditions. The ointment is bacteriostatic thus reducing danger of secondary infection.

Administration: Local application as indicated.

Source: Cutter Laboratories, Berkeley, Calif.

DIENESTROL

Description: A synthetic estrogen differing from diethylstilbestrol and hexestrol in degree of unsaturation in side chains.

Form supplied: Yellow tablets 0.1 mg. and orange tablets 0.5 mg. in bottles of 100 and 1000.

Use: Intended for use in menopausal therapy and treatment of suppression of lactation.

Administration: Orally in menopausal syndrome, 0.1 mg. to 0.5 mg. daily for mild to moderately severe cases; 0.5 mg. to 1.5 mg. daily for severe cases or when the climacteric has been artificially induced. In suppression of lactation, 0.5 mg. three times daily for first three days and 0.5 mg. daily thereafter for one week. Unusually low incidence of side reactions reported, 1% in 204 patients. Contraindications similar to those of other estrogens.

Source: Rare Chemicals, Inc., Harrison, N. J.

(*Continued, page 8*)

Introducing a NEW·COMBISUL

another step toward safer sulfonamide therapy

First to make available to the medical profession a combination of two different sulfonamides for the purpose of decreasing the danger of renal toxicity, Schering now introduces a new COMBISUL* containing the three most valuable sulfonamides for systemic therapy—sulfadiazine, sulfamerazine and sulfathiazole. The mixture of these three compounds extends further[1] the proved value of previous dual combinations:

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COMBISUL Tablets: 0.5 Gm. in bottles of 100 and 1000.
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1. Lehr, D.: Proc. Soc. Exper. Biol. & Med. 64:393, 1947

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(*Continued from p. 6*)

IRON AND FOLIC ACID

Description: Ferrous sulfate, exsiccated 0.2 Gm. and folic acid 1.7 mg.

Form Supplied: Capsules in bottles of 100 and 500.

Use: Intended for use in common iron-deficiency anemias, including nutritional hypochromic anemia, idiopathic anemia, hypochromic anemias, and in common macrocytic anemias of sprue, macrocytic gestational anemia, gastrointestinal macrocytic anemia and macrocytic anemias of childhood.

Administration: Orally 1 to 2 capsules for adults, three or four times daily.

Source: The National Drug Co., Philadelphia 44, Pa.

KWELL

Description: Gamma isomer of 1,2,3,4,5,6-hexachlorocyclohexane in scented vanishing cream base.

Form Supplied: Ointment in 2-ounce and 1-lb. jars.

Use: A parasiticide intended for treatment of scabies and pediculosis.

Administration: Topically as indicated. One or two applications are said to be sufficient in most cases.

Source: C. S. C. Pharmaceuticals, Division of Commercial Solvents Corp., 17 E. 42nd St., New York 17.

MUCOTIN

Description: An antacid containing gastric mucin 0.16 Gm., dried aluminum hydroxide gel 0.25 Gm. and magnesium trisilicate 0.45 Gm.

Form Supplied: Flavored tablets in dose-dispenser package of 50.

Use: Intended for treatment of peptic ulcer and gastric hyperacidity. Mucotin inhibits pepsin activity and as a demulcent coating promotes healing.

Administration: Orally, 2 tablets every 2 hours or as directed by the physician. To obtain optimal results, tablets must be chewed thoroughly and patient advised not to drink liquids for a half hour after taking them.

Source: Harrower Laboratory, Inc., Glendale, Calif.

NARAKON

Description: An isotonic aqueous solution buffered to *p*H 6, containing benzalkonium chloride (1:3500) and allantoin, plain or with *dl*-desoxyephedrine hydrochloride (1%) as vasoconstrictor.

Form Supplied: Solution in 1-fluidounce bottles with dropper.

Use: Intended for symptomatic relief in head colds, simple nasal irritations and in certain acute or chronic manifestations of rhinitis, sinusitis, nasopharyngitis, grippe or congestion of allergic origin.

Administration: As nasal spray 2–3 drops or 2–3 atomizer squirts, or as nasal pack, repeated every 2 to 6 hours as necessary. Close medical supervision is necessary when Narakon with vasoconstrictor is administered to patients with heart disease, hypertension, diabetes or thyroid disease.

Source: Baybank Pharmaceuticals, Inc., Division of Chesebrough Mfg. Co., Consd., 17 State St., New York 4.

ORETON-M TABLETS

Description: Methyltestosterone, U. S. P. XIII.

Form Supplied: Tablets of 25 mg. in boxes of 15 and 100. Tablets of 10 mg. each in boxes of 15, 30 and 100.

Use: Intended for use in all conditions in the male resulting from androgen deficiency and in correcting dysmenorrhea, premenstrual tension and breast engorgement in the female. When used in proper dosage, methyltestosterone is said to have the same physiological action as testosterone propionate by injection.

Administration: Orally in dosage approximately 3 to 5 times requirement for testosterone propionate U. S. P. XIII (Oreton).

Source: Schering Corp., Bloomfield and Union, N. J.

PENICILLIN CALCIUM BUFFERED TABLETS

Description: 100,000 units calcium penicillin buffered with 0.4 Gm. calcium carbonate.

Form Supplied: Tablets in bottles of 12.

Use: Intended as adjunct to parenteral administration of penicillin in pneumococcic, streptococcic and staphylococcic infections following acute phase. May be used prophylactically in rheumatic or congenital heart disease when tonsillectomy or tooth extraction is planned.

Administration: Orally.

Source: Cutter Laboratories, Berkeley, Calif.

PENICILLIN TROCHES

Description: Potassium salt of crystalline penicillin G, 5000 units, in flavored base, compounded to dissolve slowly.

Form supplied: Troches, in Filma-Seal bottles of 25 and dispensing bottles of 250.

Use: Intended for prophylaxis and treatment of mouth and throat infections due to Vincent's organisms; also adjunctively in treatment of other infections due to penicillin-sensitive organisms localized in oral and pharyngeal cavities.

Administration: Orally. One troche inserted between the gum and cheek is allowed to dissolve without sucking or chewing. This procedure is repeated every hour or two for a total daily administration of 8 to 12 troches, according to directions

(*Continued, page 11*)

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A distributorship may be available in your area. Write for details.

(*Continued from p. 8*)

of physician or dentist. Treatment should be continued for several days after all signs and symptoms of infection have disappeared to help avoid relapse. Troches may be prescribed in conjunction with systemic administration of penicillin, surgery or other measures as indicated.

Source: Schenley Laboratories, Inc., 340 5th Ave., New York 1.

RUTAMINAL

Description: Aminophylline 0.1 Gm., rutin 20 mg., phenobarbital 15 mg.

Form Supplied: Tablets in bottles of 100.

Use: Intended as adjunctive therapy in arteriosclerosis, angina pectoris, coronary disease and congestive heart failure.

Administration: Orally, 1 or 2 tablets three or four times daily, preferably after meals, as indicated. The drug is said to be usually well tolerated, with relatively infrequent gastric irritation if taken on a full stomach. When required, dosage may be supplemented with rutin tablets. Rutaminal is contraindicated for patients with severe impairment of renal or hepatic function and in Parkinson's disease.

Source: Schenley Laboratories, Inc., 350 Fifth Ave., New York 1.

STATICIN

Description: Caronamide, chemically 4′-carboxyphenylmethanesulfonanilide.

Use: Intended as an adjunct to penicillin therapy by inhibiting renal tubular excretion of penicillin and thus enhancing and prolonging penicillin blood levels.

Administration: Orally in conjunction with oral or parenteral penicillin. Staticin, 2 Gm. every four hours during penicillin therapy, was given in clinical trials by C. C. Shaw, *et al.* (*American Journal of Medicine*, August, 1947).

Source: Sharp & Dohme, Inc., Philadelphia 1, Pa.

TOPOCIDE

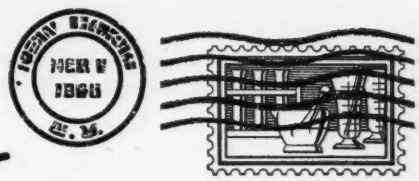
Description: An aqueous emulsion of benzyl benzoate, DDT (dichloro-diphenyl-trichloroethane), Benzocaine (ethyl *p*-amino-benzoate), polyoxyalkylene derivatives of monooleic acid esters of sorbitol anhydrides and bentonite magma U. S. P.

Form Supplied: Emulsion in 4-ounce, 1-pint and 1-gallon bottles.

Use: Intended for use against head lice, crab lice and skin parasite of scabies.

Administration: Applied locally by use of sponge, cotton or brush, or by spraying with an atomizer.

Source: Eli Lilly and Co., Indianapolis 6, Ind



Letters:

An Appeal from Java for Used Journals

Sirs:

During the last war I was a P.O.W. under the Japanese, and I lost nearly all my pharmaceutical books and periodicals. I obtained a permit from the Department of Finance to spend a few dollars to buy the most urgently needed modern books and a subscription to the JOURNAL OF THE AMERICAN PHARMACEUTICAL ASSOCIATION.

As you can easily understand I should like to study the development of pharmacy since 1941, but my request for more dollars to buy the 1941–1946 JOURNAL volumes was refused by the governmental foreign money board. The regulations for individual needs are very strict. Seeing no way out of this difficulty I wonder if perhaps one of the members who does not want to keep his JOURNALS will be so kind as to help me and spare me the mentioned volumes. Many thanks for your help.

E. A. H. J. VAN PAPENRECHT
Scheikundig Laboratorium
Noorder Magazynstraat 31
Bandoeng, Java, East Indies

Mixtures of Potent Drugs

Sirs:

I was quite interested in Goldstein's article on prescription tolerances in the JOURNAL.

In mixing white powders or capsules containing potent drugs, I have often wondered whether the drug is evenly distributed in the mixture. If all ingredients are white there is no way of being sure. I would suggest the technique of adding carmine or other suitable coloring agent to the potent drug.

If the doctor would write prescriptions in that manner one could tell by examining the prescription whether or not it was perfectly mixed.

Newton, Pa. A. J. STRATHIE

An Idea That Fails of Its Purpose

Sirs:

For four years we are required to study in an accredited school of pharmacy. Then, having passed the state examination, are we to work in ignorance from that point on? Are we to sacrifice

As appearing in current Medical Journals

The Place of IODINE
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the safety of the majority to prevent possible misuse of new drugs by the few?

. . . The Food and Drug Administration regulations and attitude result in completely uninformative labeling on most products and apparently make manufacturers hesitate to supply adequate information to the pharmacist by other means. On numerous occasions I have been embarrassed by requests from physicians for information on new items that I was unable to supply.

I am completely in accord with the purpose behind limiting the furnishing of information to anyone except physicians, but I feel that this fails of its purpose because it does more harm than good. Withholding information from responsible people is a step backward and not the proper method of attack.

Baltimore, Md. W. HERDMAN SCHWATKA, JR.

Gift from Army Pharmacist

Sirs:

Thank you for sending me copies of the JOURNAL during my tour of duty in the Philippines. I am Pharmacy Officer in the 10th General Hospital.

I just returned from a delightful two weeks' visit in Japan. While shopping with the hope of finding a presentable copy of the Japanese Pharmacopœia, I was able to purchase a *Pharmacopœia Augustana Renovata*, which appears to have been printed in the year 1684 and is in a good state of preservation. It is being sent to you as a gift, with the hope that this volume will be a welcome addition to the archives of the ASSOCIATION.

CAPT. MAURICE SISKEL
c/o P.M., San Francisco, Calif.

A. Ph. A.'s thanks to Capt. Siskel for his generous gift of a rare volume.—THE EDITOR.

Drug Industry in Palestine

Sirs:

Mr. Haushalter's letter in your July issue does not convey a complete and well-informed representation of the local pharmaceutical industry in Palestine.

As far as our own enterprise is concerned, we are sending you copies of our "Therapeutic Problems of Today," as well as an export catalogue. . . . You will note the development of our production and research work.

Personnel here includes competent pharmacists, chemists and physicians who have come to this interesting part of the world from the universities, hospitals and industries of Switzerland, Germany and Austria.

Jerusalem, Palestine TEVA, Ltd.

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Phenol offers intermediate relief —with moderately prolonged effect. And it in turn is overlapped by the third agent . . .

3. PROLONGED

Benzocaine, which has already begun to soothe the affected areas, continues to relieve itching over a prolonged period.

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CUTTER DERMESTHETIC OINTMENT* gives 3-phase control of pruritus! Acts fast—medium—slow! It relieves itching at once! It prolongs the soothing effect! It minimizes psychic trauma.

And here's the reason why...Cutter Dermesthetic Ointment provides three anesthetic properties with overlapping action.

Fast-acting, long-lasting Dermesthetic Ointment stops itching caused by poison ivy, poison oak, insect bites, industrial rashes and other pruritic conditions. Greaseless, it does not dissolve and spread oil-soluble irritants. It can be removed easily, will not stain skin or clothes.

While not intended as a bactericidal agent, Dermesthetic Ointment with its benzyl alcohol and phenol content is bacteriostatic. This bacteriostatic action, in combination with the quick, lasting relief from pruritus, helps to avoid possible infection from scratching.

Try it, won't you? Clinical samples will be sent on request.

*Cutter's trade name for Anesthetic Ointment

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Journal of the

AMERICAN PHARMACEUTICAL ASSOCIATION

OL. IX, No. 1
ONSECUTIVE No. 1

Practical Pharmacy Edition

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JANUARY 1948

TABLE OF CONTENTS

A. Ph. A. Officials and Administrative Staff..... 4
New Prescription Products..... 6
Letters..... 11
New Publication Services in the New Year..... 16
The Golden Gate in '48..... 17
Straight from Headquarters..... 18
1947 in Review..... 20
Aromatic Elixir, a New Simplified Procedure..... 24
What Are Reasonable Tolerances?..... 26
Pharmacy: Its Present Status in Government Services
Your Profession in the U. S. Army..... 32
Your Profession in the U. S. Navy..... 36
Your Profession in the U. S. Public Health Service... 39
Your Profession in the Veterans Administration..... 42
Information Service..... 48
For the Pharmacist's Bookshelf..... 51
A. Ph. A. Branches..... 52
Typical Days..... 53
New and Nonofficial Remedies..... 56
New A. Ph. A. Members..... 57
Briefly Noted..... 62
Monthly Drug and Advertising Indexes..... 64

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New Publication Services In the New Year

An Editorial

As THIS edition of the JOURNAL observes its eighth birthday, it reflects another step in growth and development. The reactions to this publishing venture of the A. PH. A. have always been favorable; and certain new and revised editorial features aim at greater usefulness. We hope our members find that the improved typography and illustrative treatment make their JOURNAL more enjoyable and more readable.

Development of the *Practical Pharmacy Edition* parallels the steadily growing support of the ASSOCIATION'S program by general practitioners of pharmacy. But it also goes hand in hand with increased use of the ASSOCIATION'S publications to carry the manufacturer's message to those pharmacists most interested in prescription practice. This is, of course, a mutually helpful relationship. It should be recognized by A. PH. A. members when they contact manufacturers in response to announcements in the JOURNAL.

In both editorial and advertising pages, the *Practical Pharmacy Edition* concentrates attention on professional information adapted to use by pharmacy's general practitioners. It has a popularized style and large circulation. This may have reduced attention to the solid value of its more scientific counterpart, the *Scientific Edition*, except among laboratory workers.

But modern trends in medical care make pharmacy more scientific in practice, as well as more professional. At the same time the educational level in pharmacy has risen steadily. These factors give the *Scientific Edition* increased significance to competent practicing pharmacists.

Therefore, as part of A. PH. A.'s program of expanding membership services, the monthly *Scientific Edition* will now go to each member (in addition to the *Practical Pharmacy Edition*), following payment of the 1948 dues.

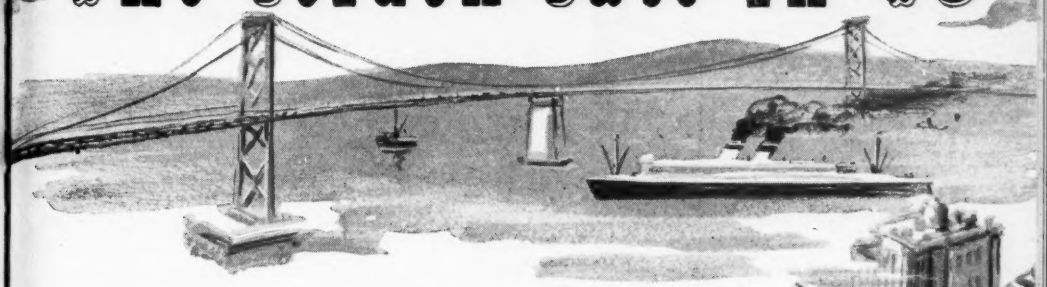
Those who have not previously subscribed will find that it contains scientific papers of importance in pharmacy—and more. Its abstract section summarizes the world's literature of pharmacy and the allied sciences.

Here is something unique in American pharmaceutical publishing in which pharmacists may take particular pride. Let your physicians see the quality of scientific articles in this journal. And don't neglect to browse through Scientific Abstracts each month to get a quick briefing on scientific progress in pharmacy.

The ASSOCIATION hopes you will see something in each issue of each edition that will furnish, in the New Year, a basis for more effective contact with your physicians or for developing some phase of your professional service.

In good measure the pharmacist depends on publications of his professional organization to make its contributions and objectives a part of his own life and professional services. Here also is the medium for interchange of ideas and information among members, which is one reason for a professional association. As the A. PH. A. takes these steps forward in its publication program, plans are already under consideration for further expansion. The comments and suggestions of individual members can contribute much to making this program meet their needs.

The Golden Gate in '48



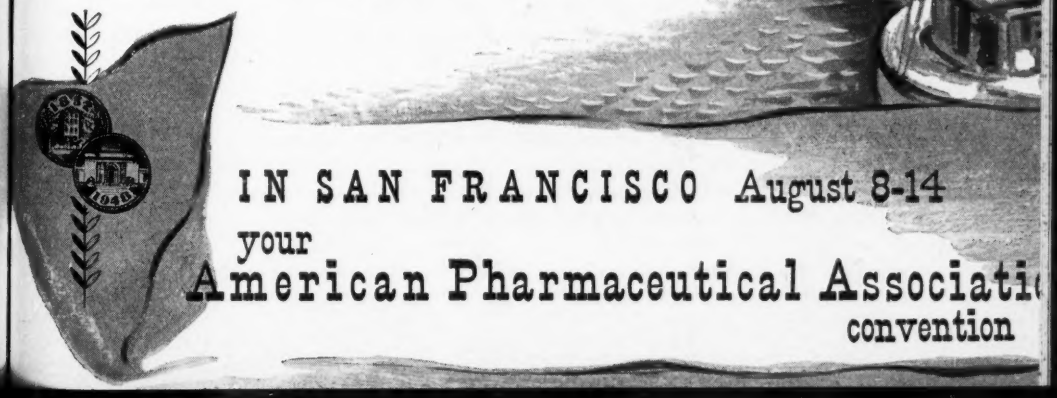
MILLIONS of years ago a mighty cataclysm broke open a fissure in the high wall of hills separating the land from an unnamed ocean. And through the cleft rushed the sea, to fill the pleasant valley. We now call it San Francisco Bay. Thus violently, according to geologists, was formed one of the world's great natural harbors.

On a narrow peninsula between bay and ocean has grown a great city, San Francisco—famed in fact and fiction. It was the gold rush of '49 that really populated this fabulous city and the surrounding pioneer area. Almost a century later, in August of '48, pharmacists will retrace the steps of the forty-niners. They will not be looking for gold, but will find here a treasured experience.

It will be a pleasant trip, by fast modern transportation. But for many pharmacists it will also be a pioneering trip to a hitherto unseen part of their country. Along the rugged Pacific coast, in the cosmopolitan cities, among the virgin redwood forests, pharmacists will find new and unforgettable vacation experiences. Here, too, in San Francisco they will meet old friends and fellow members in the ASSOCIATION at its 94th meeting.

The A. PH. A. officers and California pharmacists are already at work on a professional program to make your August vacation at the Golden Gate as profitable as it will be pleasant.

Plan now to attend the annual meeting of your professional organization in California vacation land. California pharmacists and the A. PH. A. cordially invite you to the Golden Gate in '48. The date: August 8 to 14.



IN SAN FRANCISCO August 8-14

your

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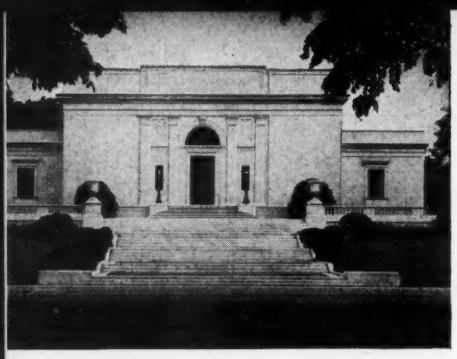
convention



STRAIGHT FROM HEADQUARTERS

by ***ROBERT P. FISCHELIS,*** Secretary

AMERICAN PHARMACEUTICAL ASSOCIATION

A New Year

TO ALL members of the AMERICAN PHARMACEUTICAL ASSOCIATION and readers of THIS JOURNAL we extend our sincerest wishes for a Happy New Year. Unfortunately happiness has become a very relative term. Without formal terms of peace or agreement among dominating world powers on controversial issues, our international relations are not in a happy state. On top of that we have a large part of the world enduring hardships of hunger, lack of shelter and clothing and looking to us for help. Giving of our own resources is depleting our backlog of food and materiél, so that both the national and the international economy are somewhat out of line. This is not conducive to happiness either.

We are fortunate in having survived World War II with relatively little damage to our physical equipment but we have a long way to go to meet the requirements for consumer goods, housing and transportation—which collectively constitute the American peacetime standard of living. And, even before the necessary adjustments are anywhere near complete, we hear talk of the necessity for preparing for future emergencies. We are asked to institute compulsory military training for our youth and plan for mobilizing industry if, as and when needed to defend our ideals.

Let us hope that our diplomats, our Department of State, the President and the Congress and their counterparts in other nations may be endowed with the wisdom and courage to bring about peaceful agreements soon, so that the world may settle down to reconstruction and rehabilitation.

We pass through cycles of prosperity, un rest, depression, creation and destruction in generation after generation. All of recorded history seems to point to the survival and gradual improvement of the human race, but there are many who fear that the brilliant scientific discoveries of our generation may lead to our destruction unless harnessed.

It stands to reason that American scientists must continue their excursions into the unknown and that something of the ardor and cooperative spirit displayed during the war years must be cultivated. This must be done if we are to remain at or near the head of the procession in developing the scientific secrets residing in the broad areas of chemistry, physics and biology.

We also have a necessary job to perform in the social sciences. All of this may require some public assistance, and the creation of a Federal Science Foundation has been generally agreed upon as supplying a long-felt want in this direction. We therefore look forward to action by the Congress early in 1948 to devise a satisfactory method of activating such a Foundation. If and when this is brought about, American pharmaceutical scientists must join with scientists in other fields to work for a continuous and adequate flow of manpower into the pure and applied research laboratories.

The concentration of groups of scientists in different laboratories on the same problem and periodic pooling of the information developed was so productive during the war that it should be continued.

As time goes on, pharmacists will be carrying on researches in collaboration with others in the field of pharmaceutical chemis-

try, pharmacology and biology at the U. S. Public Health Service, in the Army, the Navy, the Food and Drug Administration and private industry and college laboratories. Our over-all planning must include the segregation of pharmaceutical manpower for these specific assignments and arrangement for giving such personnel exemption from certain military duties in the event of universal military training.

Supply and demand

SPEAKING of manpower, we have been endeavoring to think through the problem of absorption of the large number of graduates of colleges of pharmacy expected to become available after 1949. If we continue to have upward of 50,000 pharmacies in the United States, and they are to be conducted according to law, we should require at least 100,000 pharmacists to man them.

No pharmacy can remain open for service more than eight hours a day without employing at least two pharmacists, for state laws require that a pharmacist shall be in charge at all times. Practically every pharmacy engaged in the compounding of prescriptions is open more than eight hours a day, so the potential need for 100,000 pharmacists is clear.

It is very unfortunate that some boards of pharmacy or other state pharmacy law enforcement officers fail to enforce the pharmacy laws properly and at times endeavor to exercise lenience with operators of pharmacies who are known to leave their shops without a registered pharmacist in charge at all times. The so-called favor thus extended to an individual operator is a contribution toward breaking down the standards of professional service as a whole. The public is entitled to continuous supervision over the production and distribution of the drugs that it is required to use.

With government pharmacy, manufacturing, detailing, wholesaling, teaching, administration, hospital pharmacy, journalism and miscellaneous pharmaceutical services each claiming a quota of the annual supply of pharmacists, we should not find it difficult to place the additional men and women now preparing to enter pharmacy, for census figures indicate there are but 80,000 registered pharmacists available today.

Directory of pharmacists

STRANGE as it may seem, no one has any accurate figures on the total number of registered pharmacists in existence. A count was made some years ago by asking each board of pharmacy to send in the figures for its own state. Sounds like an easy way to get at the total. The fact is that only states requiring annual renewal of the pharmacists' registration really know how many of the registered pharmacists listed on their books are actually alive and in practice.

Furthermore, only by an actual comparison of the names of those licensed in all states could one eliminate duplications in the count, for many pharmacists are registered in more than one state.

There should be a Directory of Pharmacists just as there is a Directory of Physicians. The AMERICAN PHARMACEUTICAL ASSOCIATION is giving serious consideration to publication of such a directory.

The American Medical Association has records of all physicians in the United States dating back sixty years or more. Keeping such records up to date and adding to them from year to year is a relatively simple task once the major job of gathering the material for the original directory has been completed. We have no illusions about the magnitude of the original undertaking. The fact that the entire drug industry will benefit from a directory of pharmacists makes it so much more desirable and essential.

We should be able to answer authentically questions like the following: How many licensed pharmacists are there; where are they located; how many in each state, large city, trading area; into what age groups do these pharmacists fall; how many are over 25, 30, 40, 50, 60, 70 years of age; how many have had war service; how many would be available for war service; how many are disabled, incapacitated, handicapped in some way; how many are graduates of the 2-, 3-, 4-year courses; how many hold graduate degrees?

Properly collected, these statistics will enable the profession of pharmacy to cooperate with such agencies as Selective Service, National Roster of Scientific Personnel, War Manpower Commission and the drug industry to conserve manpower, to assign properly trained personnel to necessary functions and keep essential services available.

1947 i

A PROGRESS REPORT IN FIELD OF

HIGH on the list of new drugs introduced during 1947 were metopon and methadon, powerful synthetic replacements for morphine. Although both carry addiction liability, the side effects, sedation and dependence are less marked than with traditional narcotics. At year's end intensive research was aiming at a further conquest of pain that would minimize the age-old problem of narcotic addiction.

While newly available analgesics eased the suffering of advanced cancer victims, treatment of the disease remained inadequate. And 1947 brought rapid expansion in research through funds from government and private contributions.

Radioisotopes were put to work in many phases of cancer investigations and other knotty problems of biology and medicine. International distribution of radioisotopes was authorized to speed peacetime scientific progress.

New antibiotics from many sources were reported, and the widening circle of investigations indicated that researchers in this field were still on a therapeutic frontier. Propyl thiouracil became generally available to control hyperthyroidism with relatively little danger of serious side effects that marked its predecessor.

Legislation for a National Science Foundation was passed in 1947 but reluctantly vetoed by the President due to questions of administration. The AMERICAN PHARMACEUTICAL ASSOCIATION joined with other scientific societies in an Intersociety Committee on Science Foundation Legislation. The sciences and professions were looking forward in the New Year to adoption of a revised law that would stimulate and coordinate badly needed fundamental research.

During the year legislation established a Medical Service Corps in both the Army and Navy, bringing increased opportunities for pharmacists in commissioned rank and for development of military pharmacy. A Pharmacy Service was established in the Hospital Division of the U. S. Public Health Service, headed by a pharmacist, and in the Veterans Administration further progress appeared in develop-

in review

OF INTEREST TO THE PHARMACIST

ment of various pharmaceutical services.

The Pharmaceutical Survey neared completion, and pharmacists looked forward to a report during the coming year on this broad-gauge re-evaluation of the needs of pharmaceutical education and practice. Meanwhile, the Survey and its advisory committee took a serious view of continuing record-breaking enrollments in pharmacy colleges, with prospects that after 1951 there may be double the number of graduates considered to be normal replacements.

Membership in the AMERICAN PHARMACEUTICAL ASSOCIATION climbed to nearly 17,000 associate and active members, as 1947 drew to a close. Three new local branches and six new student branches were chartered by the ASSOCIATION, as its program of activities continued to expand. Full use of most office and laboratory space at the headquarters building in Washington centered the Council's attention on the possibility of acquiring additional property and buildings.

By year's end construction of a memorial flagstaff neared completion on the A. PH. A. grounds, and ceremonies were scheduled for the spring to dedicate it to pharmacists who had served their country in time of war.

Additional equipment and staff were added to facilities of the A. PH. A. laboratory during 1947.

A Division of Hospital Pharmacy was formally established by the ASSOCIATION acting jointly with its affiliate, the American Society of Hospital Pharmacists, and plans called for placing the Division under the full-time direction of a hospital pharmacist during the coming year.

The ASSOCIATION's Committee of Six continued its studies of the A. PH. A. Constitution and By-Laws, which will culminate in recommendations for a smoother functioning organization that will keep in step with the growing membership and scope of activities.

In April the AMERICAN PHARMACEUTICAL ASSOCIATION held the first district meeting in its history, to supplement the annual national conventions. The success of the venture brought immediate demands and plans to extend this program to put the membership more closely in touch with their organization and with professional developments.

The U. S. Pharmacopœia XIII and the National Formulary VIII became official in April, both reflecting an era of rapid change in pharmacy and medicine.

In meetings and publications of pharmacy, and related professions, there was also evidence of accelerated scientific progress. Highlights of these developments appear below, as summarized from Science Service reports and in part from the JOURNAL OF THE AMERICAN PHARMACEUTICAL ASSOCIATION.

MEDICAL AND PHARMACEUTICAL SCIENCES

HOPE for effective drug therapy in tuberculosis was aroused by good results of streptomycin treatment reported from many clinics.

Trial of vaccination with BCG against tuberculosis was begun in the United States as part of a long-range study.

A chemical effective against tuberculosis in guinea pigs was found in long yellow crystals extracted from a lichen popularly known as California Spanish moss.

Discovery of a prophylactic effect of penicillin against syphilis was announced.

Various fungi and parasitic yeasts which cause disease in man and animals were found susceptible to tomatin, new addition to the family of antibiotics, made from the juice of leaves and stems of the tomato plant.

Bacilli in a badly infected leg wound yielded an antibiotic called bacitracin, found effective against boils, carbuncles, styes and ulcers.

Chloromycetin, new penicillin-like remedy, was found effective against experimental rickettsial and virus infections.

Other new antibiotics of some promise include: grisein, from the same soil organism as streptomycin and for use with it; aerosporin, from a bacterium in some soils and tap water; modified form of gramicidin, for use against surface infections; and compounds found in radish seed, garlic, cinnamon oil and 213 species of mushroom.

Two new blood fractions were isolated in further research at Harvard. Fraction IV-7 is the only one among 25 plasma constituents now known that combines chemically with either copper or iron to transport these elements through the body. The other newly identified blood chemical is precipitated from human serum albumen as a mercury salt. It is hoped that these fractions, like others made available by Cohn and his co-workers, will have practical applications in therapy and research.

Experiments with mice revealed that pneumonic plague was controlled by streptomycin in 90% of the cases.

Chemicals tested in the treatment of cancer were: KR, widely heralded Soviet discovery; radioactive gold; ethyl carbamate or urethane; a synthetic substitute for vitamin K; sodium fluoride, iodoacetic acid and malonic acid; and podophyllin.

Sodium fluorescein, dye that glows under ultraviolet light, was used successfully to show a surgeon the extent of cancer tissue to be removed.

Two blood tests for cancer were announced, one with the dyes, brilliant cresyl blue and methylene blue, and the other by inspection of serum under ultraviolet light.

Spread of cancer cells, called metastasis, was attributed to lack of adhesiveness of the cell surface.

Chemical in mother's milk that causes breast cancer in mice was isolated.

Evidence of a relation between breast cancer and over-femininity, in the sense of unopposed action of female hormones, was found.

Clue to why cancer kills was found in its action of robbing the body of its store of nitrogen and making it unavailable for metabolic use.

Tyrosinase, which turns potatoes black, and another chemical, urethane, were reported to have some benefit in treatment of leukemia.

New synthetic analgesic known variously as methadon, amidone, dolophine and 10820, was reported two to four times as effective as morphine, but also capable of causing addiction.

A morphine derivative, metopon, found less addicting than morphine, was made available for pain relief in cancer patients, under restrictions to prevent its misuse.

Blood-shunting operation in which the great cardiac vein was made to do the work of the heart's artery was developed for relief of coronary thrombosis and sclerosis.

FURTHER RESEARCH ON DENTAL CARIES

New measures against dental caries include: plan for mass control of caries by adding glycerol aldehyde (simple, tasteless chemical) to all sugar at the refineries to check fermentation and acid formation from sugar as it is eaten; tryptophane, an amino acid, as a possible decay preventive; treatment of children's teeth twice a year with sodium fluoride.

Remedy for intestinal paralysis was found in a poisonous war gas, di-isopropylfluorophosphate (DFP).

Vitamin C and the amino acid, histidine, given together to cause release of histamine in the body, were announced as apparently an effective treatment for serious conditions, including gangrene, in which blood circulation is impaired.

Improved treatment for infantile paralysis followed discovery that bulbar poliomyelitis takes five different forms, each requiring specific treatment.

First direct observation of protein synthesis outside the animal body—of importance in cancer study—was achieved with radioactive sulfur.

Antimalarial 100 times as powerful as quinine was extracted from the leaves and roots of a Chinese plant, *Dichroa febrifuga.*

PAB, used in ridding livestock of parasitic worms, had a sulfa-like action against Brucella; a chemical from mold found in soil of cattle inclosure showed promise as remedy for undulant fever.

Malaria parasites were grown outside a human or animal body, offering a new technique for testing antimalarial drugs.

AGAINST TROPICAL DISEASE

Piperazines were announced as promising for treatment of the tropical disease, filariasis.

Atherosclerosis was reported linked with the physical state of fat in the blood.

BAL was found effective in overcoming gold poisoning in arthritis patients getting gold salts treatment.

Quick antidote to the occasional hemorrhagic effect of heparin was discovered in protamine.

Blood chemical, hemin, was found to prolong insulin's action.

New fat hormone produced by the adrenal glands

was discovered responsible for moving fat from the reserves of the liver during starvation.

Peacetime national blood program for collection and distribution without charge of blood, plasma and blood fractions used to treat and prevent disease was announced by the American Red Cross.

Toluidine blue was found effective in laboratory tests to control the bleeding of radiation sickness.

New atomic danger, plutonium poisoning or "plutonism," was found to cause greying hair, liver damage and bone cancer in laboratory animals; treatment with a harmless metal, zirconium, to displace the poisonous element, was reported effective.

Radioactive sex hormone was made for the first time by using carbon 14 from the atomic pile to prepare synthetic testosterone.

Radioactive bacteria and radioactive penicillin were prepared so that scientists could trace both the bacteria and the drug through the body and determine how the body's immune mechanisms work.

A new drug, dibenamine, and pentobarbital may avert death from shock following severe bleeding, it was reported.

Patients with liver disease and abdominal dropsy were reported to have increased amounts of an antidiuretic substance in the blood.

A fat mobilizing substance or hormone was discovered in the urinary excretion of fasting animals.

Para-aminosalycilic acid, PAS for short, proved effective in checking tuberculosis in guinea pigs.

The Nobel prize in medicine and physiology was awarded to Dr. Carl F. Cori and his wife, Dr. Gerty T. Cori, Washington University School of Medicine, St. Louis, for their discovery of what happens to sugar and starch in the body, and to Dr. Bernardo A. Houssay, of Buenos Aires, for his discovery of the relation between the pancreas and the pituitary.

Sodium theophylline glycinate was prepared and found to be stable, active and well tolerated in animals; objective is to avoid decomposition, and resulting irritation, occurring with present theophylline combinations.

IMPROVING ASSAYS

A colorimetric method to assay ergot and ergot preparations for total alkaloids and for ergonovine was reported after a collaborative study of several years; it is intended to replace inadequate methods.

A photoelectric-colorimetric assay for digitoxin by comparison with a standard powder was developed; efforts to assay digitalis glycosides satisfactorily by chemical means continued in various laboratories because of the expensive and difficult cat bioassay.

A new concept of the role of hydrogen-ion concentration and buffer systems in the preparation of ophthalmic solutions was reported, based on experiments, and plans were projected for a new therapeutic evaluation of pharmaceutical requirements.

Trimethyl cetyl ammonium pentachlorphenate (TCAP) and undecylenic acid together in a penetrating base were reported to be more active against pathogenic fungi than tested preparations of other fatty acids or their salts.

Presence of a protective enhancement factor in amorphous penicillin was demonstrated in a large proportion of penicillin samples; the factor itself is devoid of *in vivo* activity although it enhances activity of penicillin.

BIOLOGICAL SCIENCES

HUMAN embryo only about four days old was the first and only authenticated one obtained before attachment to the uterus in the mother's body.

Before birth, superior babies-to-be were successfully transplanted into mother rabbits of just ordinary breeding.

Some hereditary traits were declared to pass from one generation to another by means of plasmagenes, carried in the general protoplasm of the cell rather than as genes in or on the chromosomes.

Changes in the chromosomes of developing male sex cells of plants were produced with radioactive phosphorus taken up in water absorbed by the plants.

Large-scale campaigns for the extermination of flies were successfully waged in several sections of the country.

Outbreak of hoof-and-mouth disease in central Mexico, serious menace to livestock in the United States, forced authorities of both governments to unite in fighting the virus; only known remedy is total extermination and deep burial of all infected or exposed animals.

(*Continued, page 58*)

What happens when dandelions survive a fall spraying with the herbicide 2,4-D was demonstrated last spring. When they tried to blossom, botanical monstrosities appeared as shown in the photograph. Common effects were the "siamesing" of stems and production of multiple and aborted flower-heads, resembling fasciation. This is particularly marked in the stem shown at the left. Strangest effect was that shown on the right where a nearly normal stem bore a frustrated flower-head, which in turn produced from its center a secondary miniature stem and flower-head.

Aromatic Elixir. .

A New Simplified Procedure

Modified Formula

Compound spirit of orange	12 cc.
Calcium phosphate	50 Gm.
Syrup	375 cc.
Alcohol, Distilled water, of each, enough to make	1000 cc.

Procedure: Thoroughly mix the compound spirit of orange with the calcium phosphate in a mortar, and transfer the mixture to a filter paper which has been previously wetted with a 25% solution of alcohol. Next pass 650 cc. of 25% alcohol solution through the filter. Add the syrup to the clear filtrate and mix well.

by GLEN J. SPERANDIO and C. O. LEE*

AROMATIC ELIXIR has remained practically unchanged as to title, formula, and procedure since the Eighth Revision of the U. S. Pharmacopœia, except that it is now alphabetized under *aromatic* rather than under *elixir* as formerly.

The fact that this preparation has been retained, without change, for so long does not mean that the formula is wholly satisfactory. Perhaps no preparation has elicited more complaints from pharmacists than this one. We are in complete agreement with Toplis[1] who said that simple elixir is "one of the greatest time consumers in the U. S. P." He had in mind the hours required to filter it. It is not only hard to filter, but is difficult to clarify. Other complaints are that it is too sweet and that its alcohol content is too high for satisfactory use as a vehicle in certain instances.

If aromatic elixir is a stable, pleasant-tasting, generally compatible and valuable vehicle for dispensing, then there is justification for trying to simplify the procedure for making it.

After many years of teaching and manufacturing experience, we believe that the preparation under discussion is one of the most difficult to make. Criticisms of the method of preparing it are not of recent origin. Many men, from time to time, have offered modified formulas and procedures for aromatic elixir, and each has claimed that his process yields a superior product.

In 1906 Toplis[1] suggested the following method: Mix the compound spirit of orange with the talc (or with magnesium carbonate) and to this, in a mortar, add gradually a mixture of the water and alcohol. Then filter this mixture, add a calculated amount of sugar, and dissolve by agitation. He claimed that this would give a good elixir in fifteen minutes.

Sass[2] later reported that the replacement of the talc with 5 Gm. of magnesium carbonate would yield a perfectly clear elixir. In commenting upon aromatic elixir in 1917, Cook[3] stated, "The formula remains unchanged. It is unfortunate that talc, which is not a satisfactory filtering media, was not replaced by purified siliceous earth." He claimed that

* Purdue University School of Pharmacy, Lafayette, Ind.

this substitution increased the speed of filtration and insured a brilliantly clear elixir.

Krantz and Carr[4] studied the *p*H of aromatic elixir and concluded that normal magnesium carbonate was the best filtering agent. Havenhill and Smolt[5] suggested that terpeneless oils were more soluble and gave clearer solutions than the regular oils. In 1933 Fantus and his associates, in discussing the principles of good elixir making, stated that the prime secret of filtration was in keeping the viscosity of the liquid low until after clarification, and confirmed the opinion of earlier workers that talc was not a good filtering agent.[6] The following year Lee and Close[7] studied many formulas for making aromatic elixir. They recommended a formula and procedure quite similar to that of Toplis, but critics claimed that it did not have the proper flavor.

Experimental

The experimental work of this study was simple, consisting of repeated tests and observations upon the following:

1. Use of plain and fluted filter paper.
2. Substitutes for talc.
3. Variations in procedure.
4. Testing the finished product.

In an effort to make the filtering process as simple as possible, ordinary No. 500 filter paper was used. The rate of filtration through plainly folded and plaited papers was not significantly different.

The substitutes used for purified talc were precipitated calcium carbonate, prepared chalk, kaolin, calcium phosphate, bentonite, charcoal, magnesium carbonate, commercial talc, and white sand. After a number of tests and observations with these clarifying agents, magnesium carbonate, calcium carbonate, and calcium phosphate proved to be the most promising. Calcium phosphate is preferred to calcium carbonate because it is the less alkaline of the two salts.

Using calcium phosphate as the dispersing agent, the following formula and procedure are proposed:

Compound spirit of orange	12 cc.
Calcium phosphate	50 Gm.
Syrup	375 cc.
Alcohol,	
Distilled water, $\overline{aa}$, *q. s.*	1000 cc.

Thoroughly mix the compound spirit of orange with the calcium phosphate in a mortar and transfer the mixture to a filter paper which has been previously wetted with a 25% solution of alcohol. Next pass 650 cc. of the 25% alcohol through the filter. Add syrup to clear filtrate and mix well.

The elixir can be prepared by this procedure in about twenty minutes, whereas many hours are needed to prepare the official elixir because of the time required for clarification and filtering.

Since there are no tests for the identity and purity of aromatic elixir, it is difficult to compare one elixir with another. To get some kind of comparison of the modified elixir with the official product, one-ounce samples of each, labelled *a* and *b*, were given to 12 registered pharmacists. Nine of the 12 preferred the modified elixir to the official one as judged by odor, taste, and clarity.

When compared as to specific gravity and alcohol content, the modified elixir was a little less dense than the official sample. It had a higher alcohol content, consistent with its specific gravity.

The modified elixir has not been observed after long periods of storage, but there is nothing to indicate that it would deteriorate.

We feel that by using chemicals of Pharmacopœial quality and the exercise of careful technique, this modified formula and procedure offers decided advantages over the official method. First of all, the process is not time consuming. Secondly, the finished elixir is just as good as and perhaps better than the official elixir with respect to odor, taste and clarity. The formula is recommended to pharmacists who wish to prepare simple elixir extemporaneously.

REFERENCES

1. Toplis, Wm. G., *Am. J. Pharm.*, 78, 332 (1906).
2. Sass, S. K., J. Am. Pharm. Assoc., 1, 1251 (1912).
3. Cook, E. F., *ibid.*, 6, 75 (1917).
4. Krantz, J. C., and Carr, C. J., *ibid.*, 19, 1095 (1930).
5. Havenhill, L. D., and Smolt, M. G., *ibid.*, 23, 124 (1934).
6. Fantus, B., *et. al.*, *ibid.*, 22, 655 (1933).
7. Lee, C. O., and Close, M., *ibid.*, 23, 236 (1934).

PRESCRIPTION ACCURACY

WHAT ARE "REASONABLE" TOLERANCES?

NO. 3 IN A SERIES

by SAMUEL W. GOLDSTEIN†

PHARMACISTS, as individuals, think that they exercise a sufficient degree of care in their compounding work to serve the purpose of the physician and the need of the patient. Pharmacists, as a professional group, should also recognize that a small minority in their ranks do not meet reasonable standards in compounding prescriptions and extemporaneous preparations.

Pharmaceutical laws in some states invest the law-enforcing agency with the power to refuse to issue a permit or to revoke a permit to operate a pharmacy if the public health is held to be jeopardized by the manner in which the establishment is being conducted. It has been found almost impossible, however, to convince the courts that this step is necessary, even in the most flagrant cases of repeated proof of the inaccuracy of the work done in a few drugstores.

That this power has been authorized reflects credit upon the pharmaceutical profession. In practically every case, the laws governing the practice of pharmacy have been introduced into the legislatures not by non-pharmacists trying to curb pharmaceutical malpractices, but by the pharmacists themselves. They have led the fight to raise the level of professional pharmaceutical service.

Imagine the dismay and chagrin experienced by a pharmacist, who considers his compounding work in a professional spirit and who is recognized as a professional man, when he receives notice from his state pharmaceutical law-enforcement agency that a preparation compounded and sold at his pharmacy does not meet the official requirements. He will try to explain the discrepancy to his own satisfaction and to the satisfaction of the law-enforcement agent. Usually he concludes that there is no logical explanation and that he must have made a mistake. Sometimes this is the correct conclusion. Other times it is not. In many such cases the pharmacist is not entirely blameworthy, for there is evidence[1, 2] that he is sometimes expected to meet standards based upon unreasonable tolerances.

Data in two earlier publications[1, 2] indicated the degree of accuracy achieved by pharmacists. The data were based upon the recognized tolerances for official preparations and a tolerance of ±10% for prescriptions and other extemporaneously compounded preparations.

The tolerances allowed for compounds recognized in the official compendia are based upon the nature of the product and the limitations of the procedure adopted for its assay. The tolerances allowed for galenicals and other pharmaceutical preparations are based upon the tolerances allowed for the individual components with additional allowances for manipulative influences. But always there is presumed to be present the factor of control.

This control factor is important. The drug manufacturer utilizes it in his control laboratory program. A product is prepared and a portion is tested. If it is found to be outside the tolerances allowed for it, adjustments are made to bring it within these tolerances. Even in the most exacting work the uncontrollable variations of chemical

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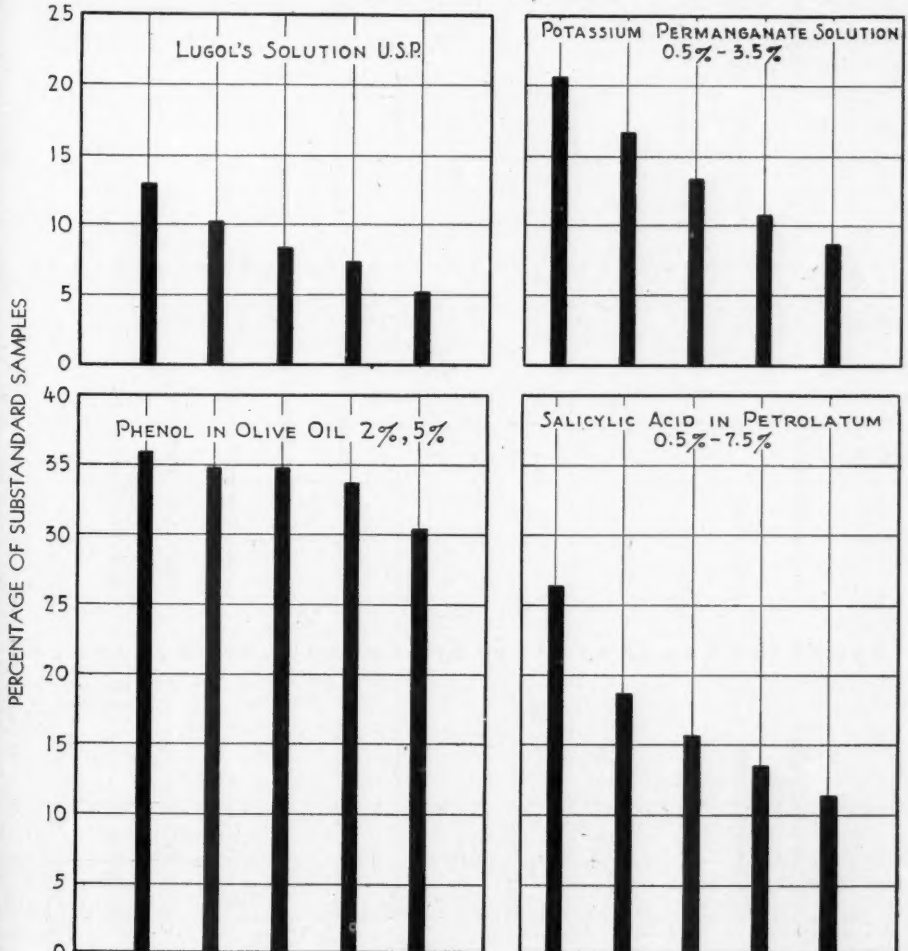
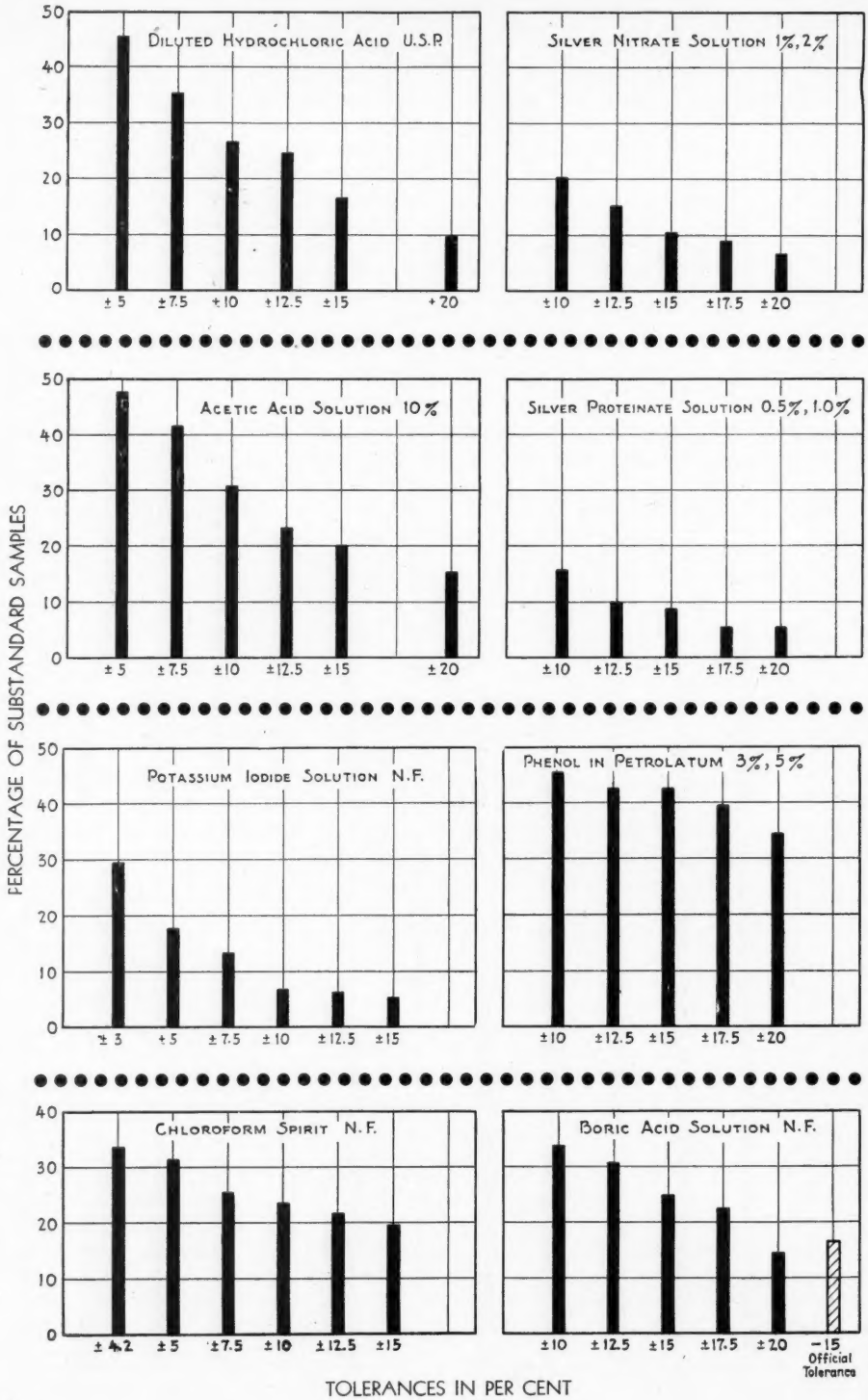
The author is indebted to J. R. McComas for assistance with the graphs.

compounds is recognized. In the preparation of the standard reagents used in the control laboratory, comparatively few chemicals are considered to be basic standards. And these usually require preliminary treatment, such as removal of adsorbed moisture, before weighing.

The factor of control becomes so important in considering tolerances for extemporaneous compounding because it is absent. Another major factor that affects accuracy in compounding is the difference in the quantities of material being weighed and measured. The U. S. P. and N. F. usually consider quantities of one liter or one kilogram in their monographs. The manufacturer works with these units, or with gallons and pounds. The compounding pharmacist, working with grains and ounces or grams and cubic centimeters, cannot be expected to achieve the degree of accuracy obtainable with larger quantities of materials. Other controllable and uncontrollable factors influencing accuracy in compounding have been discussed elsewhere.[1]

That the present tolerances are not always reasonable for products extemporaneously compounded has been established. It has been shown that pharmaceutically trained public health authorities do not apply these tolerances strictly in classifying purchased samples as standard and substandard.[2]




DILUTED HYDROCHLORIC ACID U.S.P.
SILVER NITRATE SOLUTION 1%, 2%
ACETIC ACID SOLUTION 10%
SILVER PROTEINATE SOLUTION 0.5%, 1.0%
POTASSIUM IODIDE SOLUTION N.F.
PHENOL IN PETROLATUM 3%, 5%
CHLOROFORM SPIRIT N.F.
BORIC ACID SOLUTION N.F.
PERCENTAGE OF SUBSTANDARD SAMPLES
TOLERANCES IN PER CENT
Official Tolerance

Official recognition of reasonable tolerances has been advocated. To carry out such a program, a method for determining reasonable tolerances is necessary. The object of this paper is to present a method for arriving at reasonable tolerances for compounded prescriptions and other extemporaneously prepared pharmaceuticals.

First we must recognize the fact that we are dealing with *controllable* factors and *uncontrollable* factors. It is apparent that in considering tolerances for extemporaneously compounded preparations we must agree that the influence upon accuracy of the controllable factors is lessened while the influence of the uncontrollable factors is increased. The tolerances recognized for a number of official preparations apparently need to be broadened for prescription work to allow for the uncontrollable factors.

Finding the "Critical Point"

Increasing the tolerance to the point where the influence of uncontrollable factors has been accommodated should result in a sharp decrease in the number of samples falling outside the altered limits. Further increase in the tolerance should result in relatively little change in the number of substandard samples. The point at which the uncontrollable factors have been accommodated can be called the "critical point." The effects of increasing the tolerances upon the percentage of samples found to be substandard are shown by the graphs on pages 27 and 28.

The lowest tolerance shown is the official or set tolerance, except in the case of boric acid solution. These graphic arrays appear to indicate that a reasonable tolerance for most extemporaneously compounded preparations would be about ±15%.

In compiling the graphic arrays reproduced here, samples analyzed over two or more years were included in order to have a large number in each series. A breakdown showing the results obtained with the samples analyzed in 1945 and 1946 is interesting. Results are given in Table 1 (p. 30). Where series of the same preparations were analyzed each year, similar changes in the percentage of substandard samples are noted as the tolerances are broadened.

A method for a more exact determination of a "reasonable" tolerance for any particular type of preparation has been based upon the following considerations.

In a repeated series of scientific experiments, any result which shows a deviation greater than four times the average deviation is considered outside the bounds of experimental error. That experimental result is discarded and, if necessary, the experiment is repeated. In a series of extemporaneously compounded pharmaceutical preparations, the individual and average deviations can be determined, but no results can be discarded. The product handed to the patient has not been analyzed and its extent of variation is unknown. Therefore, all the products in such a series must be considered.

A deviation greater than four times the average deviation indicates that the factors involved in a procedure are outside the field of error and that a mistake has been made. If we assume that within the field of error the controllable and uncontrollable factors are equally responsible, a deviation which is twice the average deviation should indicate the critical point within which preparations can be prepared with a "reasonable" degree of accuracy. This limit should be the point at which the reasonable tolerance is set.

This procedure was carried out with a number of preparations. (The results obtained, together with tolerances which yield the nearest equivalent results, are given in Table 2, p. 50.) The data show that by determining the tolerance at which the percentage of substandard samples most closely agrees with the results of the above method, one derives a "reasonable tolerance" for the preparation studied. This is emphasized by the fact that these percentages of substandard preparations agree roughly with the percentages of samples interpreted as unsatisfactory by pharmaceutically trained public health officials.[2]

Discussion

Any study which truly represents the facts pertaining to compounding in the prescription department should be based upon work done under actual conditions of practice in pharmacy. All the samples used in these studies were purchased in pharmacies in metropolitan and rural areas.

The degree of accuracy achieved in the compounding of preparations in these areas might be expected to differ. To clarify this point, a study was made in one state for the year 1945. The total population of the state was about 2,100,000. Of this total, 1,100,000

persons are residents of the great metropolis of the state; while 1,000,000 persons are residents of smaller communities and farms. The metropolitan area contained 392 pharmacies; while the remaining area (counties) contained 215 pharmacies.

The preparations purchased in these pharmacies were analyzed, and the results are given in Table 3. The number of samples analyzed and the percentage that did not meet the present tolerances are shown.

Of the nine different series of preparations compounded, each group of pharmacies shows greater accuracy in four of the nine series; while the accuracy on a ninth preparation is the same for each group. This shows as clearly as possible that the problem of accuracy in compounding applies to pharmacies in all sections of the state to a similar degree.

For the determination of reasonable tolerances the method based upon "twice the average deviation" appears to be satisfactory in most cases. However, it is not a perfect method. If, in a series of one type of preparation, many samples show exceedingly wide variations, this method would indicate an unreasonably wide tolerance. This would also indicate that the wide variations were not "reasonable." Further studies will be needed to establish clearly the extent that such variations are due to deficient equipment, technique or to inadequate professional attitudes or aptitudes. Such factors in themselves do not justify a broader tolerance and must be carefully evaluated.

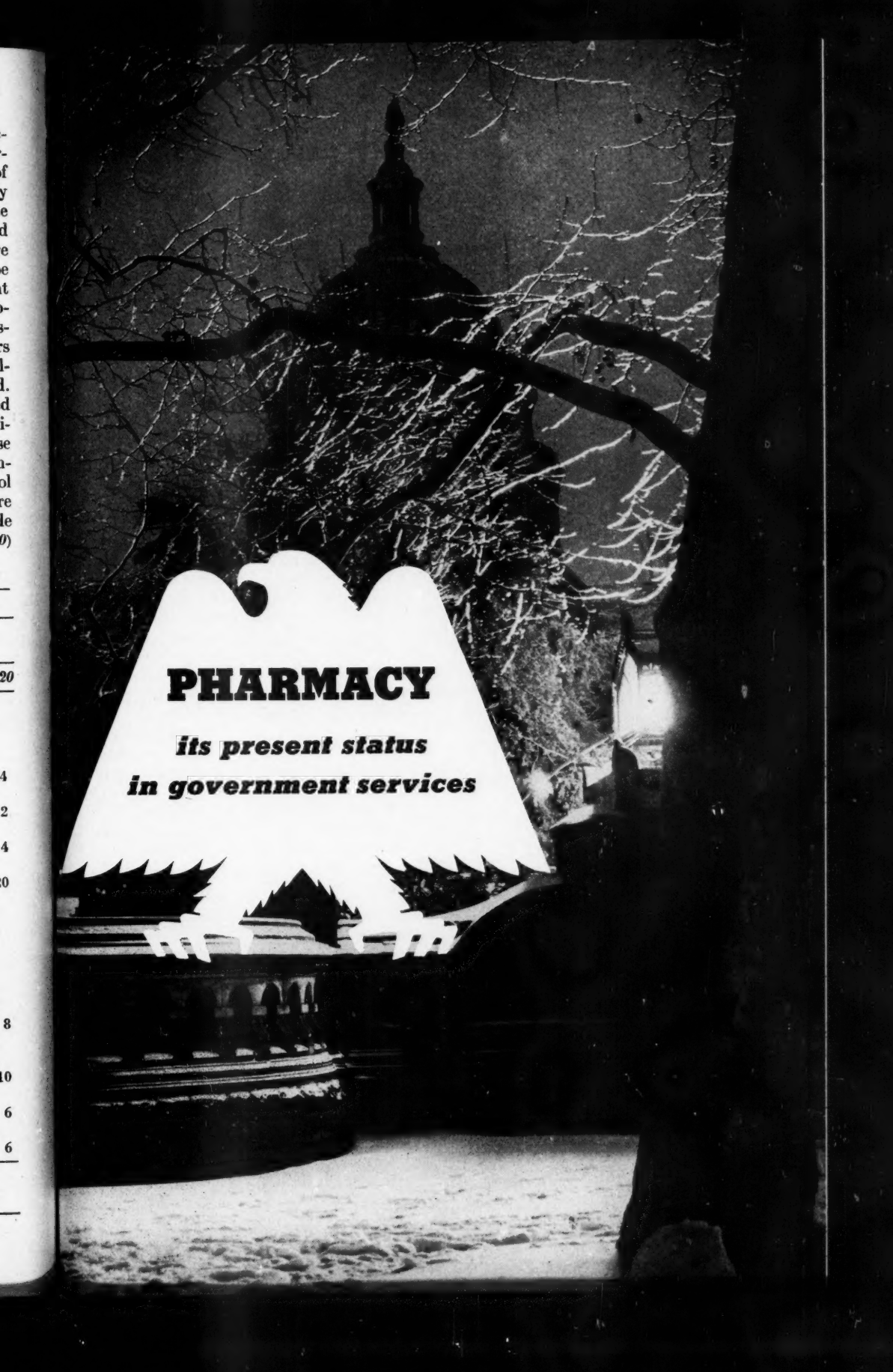
A case in point is the study of compounded preparations containing phenol. As indicated by the graphs (pages 27-28) these show a high percentage of substandard samples. The peculiar fact about the phenol preparations is that where deviations are sufficiently large to place the samples outside

(*Continued, page 50*)

TABLE 1—SUBSTANDARD PREPARATIONS AT ADJUSTED TOLERANCES

	1945								*1946*							
	Percentage of Samples Substandard at Indicated Tolerances[a]								*Percentage of Samples Substandard at Indicated Tolerances*[a]							
Preparation	±3	±5	±7.5	±10	±12.5	±15	±17.5	±20	±3	±5	±7.5	±10	±12.5	±15	±17.5	±20
Acetic acid 10%		47	34	28	19	16	16	12								
Boric acid solution N. F.[b]				33	30	29	29	15								
Chloroform spirit N. F.[c]										26	26	26	24	24	24	24
Dild. hydrochloric acid U. S. P.		38	36	26	24	14		6		38	19	14	14	7		2
Lugol's solution U. S. P.				13	10	8	8	8				13	10	9	7	4
Neo-Silvol solution 0.5%												28	24	24	24	20
Phenol in petrolatum 3%, 5%				46	41	41	41	33								
Potassium iodide solution N. F.	29	18	12	6	6	5			31	18	16	9	6	5		
Potassium permanganate solution 2.5%, 3%, 3.5%				18	14	13	11	9				24	20	14	11	8
Salicylic acid in petrolatum 2.5%, 3%, 7.5%				25	20	17	13	11				27	14	11	11	10
Silver nitrate solution 1%, 2%				18	13	10	9	8				22	17	11	9	6
Silver proteinate solution 0.5%												18	10	10	6	6

[a] Tolerances are given in ± per cent.
[b] At N. F. VIII tolerance of −15% the substandard value is 18%.
[c] N. F. VII tolerance was ±4.2%; N. F. VIII allows −7.5% and +5.0%. Substandard value remains the same.


PHARMACY
its present status
in government services

Your Profession

. . . . . in the U. S. ARMY

by BRIG. GEN. GEORGE E. ARMSTRONG
DEPUTY SURGEON GENERAL, U. S. ARMY

THE ROAD which the pharmacy profession has traveled in the Army has to date in many instances been a rocky one. The beginning of the road coincides with the inception of the Medical Department. On July 27, 1776, approximately two months after George Washington had accepted the position of Chief of Staff of the newly organized United States Army, Congress, at his instigation, organized by law the Medical Department. The original personnel comprised some six surgeons, including a chief surgeon and one apothecary. The latter individual was by law to receive the magnificent sum of one and one-third dollars per day.

Through the years the stature of the pharmacists in the military service has grown very slowly. I suppose that in the Army, as in civilian life, there was a long period when most doctors acted as their own pharmacists. With the advent of modern pharmacy developments, the Army adopted a system of special training for selected enlisted men which became the group known as "pharmacist specialists." These actually operated Army hospital pharmacies under the direction of a medical officer.

I believe that credit should go to Surgeon General Charles R. Reynolds, who first visualized the need for graduate pharmacists with a commissioned status in the U. S. Army. The Medical Administrative Corps which had been initiated by Congressional action in 1920, became General Reynolds' proposed vehicle for carrying these all impor-

Adapted and condensed from an address delivered at the 1947 meeting of the AMERICAN PHARMACEUTICAL ASSOCIATION.

Col. Othmar F. Goriup (center), pharmacist, is congratulated upon his appointment as the first chief of the Army Medical Service Corps by Secretary Robert P. Fischelis of the American Pharmaceutical Association. Gen. George E. Armstrong, Deputy Surgeon General of the Army and author of the accompanying paper, is on the right.

tant and much-needed pharmacists. Therefore, in 1936 we find Congress limiting officers to be commissioned in the Medical Administrative Corps to graduates of an approved four-year course from a recognized school or college of pharmacy. The wisdom of this step has long since been proved.

As a result of careful selection, the pharmacists who were commissioned in the Medical Administrative Corps during the years just prior to World War II have, without exception, made outstanding contributions to military medicine.

In 1943 we find Congress providing by law a Pharmacy Corps for the Regular Army to consist of 72 officers with all appointments to be made from graduates of four-year courses in recognized pharmacy schools. All members of the Medical Administrative Corps, whether pharmacists or not, were transferred to the newly created Pharmacy Corps, the Medical Administrative Corps remaining as a Reserve component only.

This brings up another Corps which must be mentioned to make this rather conglomerate picture complete. I refer to the Sanitary Corps, which was organized in 1917 but which has never existed except as a Reserve component. This Corps constituted a reservoir for certain auxiliary medical personnel, such as sanitary engineers and men skilled in various medical laboratory specialties. World War II, which saw the largest mobilization of American manpower in history, of necessity brought some semblance of unity to these various corps, all of which included important members of the modern medical team. All these corps, regardless of whether Regular Army or Reserve, became a part, during the emergency, of the so-called Army of the United States. The height of the war saw a total of 22,500 officers in the three auxiliary medical groups: the Medical Administrative, the Pharmacy and the Sanitary Corps. In many instances there was a marked overlap of duties both professional and administrative.

World War II then, by the trial-and-error method, brought the Army to a realization that the Regular establishment should have one single Corps into which, for ease of administration, could be grouped all the members of the several corps discussed above.

The plan evolved of grouping these in a so-called Medical Service Corps which became actuality by Public Law No. 337 passed by Congress on July 26 and signed by the President on August 4, 1947. The Army now has an instrumentality whereby all of the needed administrators and auxiliary professional personnel can be commissioned in a unified organization and utilized in peace as in war.

The administrative organization of this Corps undoubtedly has already become familiar to most pharmacists. Its two chief sections are the Pharmacy, Supply, and Administration Section, and the Allied Science Section. This corps has a separate promotion list, and officers therein will be advanced in grade by a combination of length of service and demonstrated efficiency on a basis similar to the remainder of the Army. Members of the corps who demonstrate their fitness will be advanced through the various commissioned ranks and have the opportunity of attaining the grade of full colonel.

A Pharmacist Was Chosen

The chief of the Medical Service Corps serves with the rank of full colonel and is chosen because of outstanding qualifications and may belong basically to any professional section of the Corps. It should be gratifying to the pharmaceutical profession that a pharmacist, Col. Othmar F. Goriup, has been appointed as the first chief of the new Medical Service Corps of the Army. The significance of this appointment will be given perspective by reviewing briefly the procedure used for selection.

A board of officers appointed by the Surgeon General was given a complete list of all the members of the Medical Service Corps, including not only the officers of the Corps having many years of Regular Army service but also all officers integrated during 1946 and 1947. The records of each officer, beginning with the most senior, were carefully scrutinized. Educational qualifications, efficiency reports, and particularly remarks made on the latter by evaluating officers were carefully considered. After considering every Regular Army colonel, lieutenant colonel, and major (as required by law), this board studied most carefully those who seemed by their records to possess the required qualifications. This group was brought individually into the Surgeon General's Office for personal interview. The chief of the Corps represents the most senior officer of this group who seemed to meet

best the requirements, as evaluated by the board.

With the selection of Col. Goriup we confidently look forward to the Medical Service Corps being welded into a fine working team with a high degree of efficiency and a fine state of morale and esprit de corps.

The chief of the Pharmacy, Supply and Administration Section has not yet been appointed but he will be a pharmacist, since eventually this section will be composed to a great extent of graduate pharmacists.

The Surgeon General has already appointed special civilian advisers on matters of pharmacy, in whom we have absolute faith and who have been most fair and cooperative in their dealings with us and in the establishment of the Medical Service Corps.

A Central Therapeutic Agents Board has been appointed in the Office of the Surgeon General. It will be the responsibility of this Board to study information submitted with a view to improving and standardizing operations, processes, and methods used by Army hospitals in applying the principles of theoretical pharmacy. Particular attention will be given to the establishment of policies on the supply of non-standard agents for use in treating civilian dependents. Recommendations of this Board will be prepared in directive form for Army hospitals for information and guidance.

The Board will consist of the Chief, Army Medical Research and Development Board, who will act as chairman, and the Chiefs of the Medical and Surgical Consultants Divisions, the Chief of the Hospital Division, the Chief of the Supply Division, and a pharmacist member of the Surgeon General's Office, or duly authorized representatives.

In line with this, commanding officers of general hospitals have been directed to appoint therapeutic agents boards in their hospitals for the purpose of making recommendations relative to the local purchase of nonstandard items, including biologicals, to be used by the hospitals. Each board will consist of not less than three officers, including the chiefs of medical and surgical services, and an officer of the Medical Service Corps who is a registered pharmacist.

The commanding officer of each general hospital has been directed to appoint a Medical Service Corps officer who is a registered pharmacist to be the officer in charge of the hospital pharmacy. The surgeons of all oversea theaters and armies in the zone of interior have been directed to appoint a registered pharmacist as officer in charge of the various hospital pharmacies within their commands in accordance with their availability in the theaters and in the armies.

Postgraduate Work for Officers

Consultations are now in progress with the Secretary of the AMERICAN PHARMACEUTICAL ASSOCIATION in an endeavor to interest leading colleges of pharmacy in making available to Regular Army pharmacist officers, programs in the form of short, intensive postgraduate courses at one or two designated universities or colleges, to enable these officers to keep abreast of the latest developments in the rapidly changing fields of pharmacy.

Appointments in the Medical Service Corps of the Regular Army are made under the provisions of War Department Circular 101 dated April 19, 1947. Candidates for the Corps must be between 21 and 30 years of age. This also provides for appointment in the Regular Army of honor graduates of senior ROTC units; and appointment of commissioned officers of the Organized Reserve Corps and National Guard who have demonstrated their fitness through one year of extended active duty during which time they are observed for their suitability for potential commissions as Regular Army officers as vacancies permit.

Legislation was presented to the Eightieth Congress in the form of a bill, H. R. 4143, which provides for Medical Department ROTC units. This bill passed the House of Representatives but did not reach the Senate floor. It is anticipated that it will be passed during the current session of Congress. When this bill is enacted into law we will have Medical Department ROTC units in which can be enrolled medical, dental, veterinary and pharmacy students. A survey has been made of the location of pharmacy schools with reference to their proximity to medical, dental and veterinary schools to see how many Medical Department units we can establish next year if possible.

As a result of these surveys, it has been determined that we could conceivably effect activation of four pharmacy ROTC units by the autumn of 1948. Should we receive official authorization to establish up to four of these units, it is then our purpose to ap-

point a graduate pharmacist as the Assistant Professor of Military Science and Tactics. Concurrently with that assignment, he would have an opportunity of taking graduate work in pharmacy at the school where the ROTC unit is located.

The reason for our emphasis on the Reserve program is that it is expected that in the future, as in the past, the Medical Service Corps Reserve will be a most important source of trained and skilled officers to assist the Medical Department in carrying out its mission. No ceiling exists on the number of officers who may be commissioned in the Reserve Corps under the National Defense Act. Approximately 12,000 officers now hold Reserve commissions in the Medical Service Corps. Obviously, the Medical Department of the Army must be ready to function at all times. If we are unable to obtain a sufficient number of pharmacists from civilian sources, it will, of course, be necessary for us to develop our own personnel.

Reserve Corps Important

It is in this phase of the development of the Medical Service Corps that we particularly require the cooperation of the pharmaceutical organizations and educational institutions. It is the hope of the Army that this group of young men will make the Medical Service Corps Reserve something in which the Army and the profession of pharmacy will take pride. We expect that as many as possible of your pharmacy graduates will avail themselves of this opportunity. It is anticipated that several hundred pharmacy students will be commissioned in the Reserve components each year. The number of Reserve officers who get active duty training each year is limited by the amount of funds made available by Congress. However, by correspondence work, meetings and occasional active duty periods, such officers can keep Reserve commissions in active status.

It is anticipated that the greatest Medical Research Center in the world may be built at Forest Glen, Md., just outside of Washington by the Corps of Engineers for the Medical Department at a cost of $40,000,000. This munificent research center is planned to resolve the medical problems of the future as well as cope with those of the present.

This project will consist of a 1000-bed general hospital, capable of expansion to 1500 beds, the Army Institute of Pathology, the Army Medical Library, a central laboratory group building, the Army Institute of Medicine and Surgery, an animal farm and quarters for the staff. It will serve to bring together many important Medical Department units now scattered throughout the United States. All these in one centralized location will require the services of many pharmacists and other members of the Medical Service Corps.

Our Laboratory and Shop Branch of the Engineering Development Division, Army-Navy Medical Procurement Office, which is located at Carlisle Barracks, Pa., should also be mentioned. The principal functions of this organization are mainly the development of new items for use by the Army and Navy Medical Departments and modifications and improvements of those items which are already standard. This laboratory has the necessary equipment to permit working with all types of metals and wood. In the development of new items, this laboratory effects the engineering design and physical development of such articles in its shops and/or in coordination with industry. The opinion of experienced pharmacy officers has been an invaluable aid to our testing and planning.

The Army-Navy Medical Procurement Office, referred to above, is the main purchasing agent for medical supplies used by both the Army and Navy. It was thought that the combining of these two agencies, into the present organization located in New York, might lead to friction in the handling and buying of drugs and other supplies used by both agencies. To date this has worked out very well and our standards in the purchase of drugs has risen considerably. Again pharmacists come to the fore, and it is expected that eventually we will have many more assigned to this office.

We have reviewed only a few of the plans related to pharmacy's part in the Medical Service Corps now being developed. We of the Army can plan, but the members and officers of this ASSOCIATION will be expected to aid us in that planning. We welcome your suggestions and cooperation for the most effective use of pharmaceutical service in the Army. And I feel sure that there has grown up between the office of the Surgeon General and your ASSOCIATION a spirit of cooperative camaraderie which is a foundation for even better and closer relationships in the future.

Your Profession

. . . . . in the U. S. Navy

by REAR ADMIRAL C. A. SWANSON

Surgeon General, U. S. Navy

IN THE early days of the late war the Medical Department of the Navy realized the rapid advancement which was being made in pharmacy, and the increasing production of new pharmaceutical preparations. This necessitated that action be taken to provide better utilization of graduate pharmacists and outstanding men of the pharmaceutical profession.

From 1941 to 1944, many graduate and registered pharmacists were procured by the Navy and assigned to duties in the Hospital Corps. At that time, under existing legislation, regulations and billet schedules, only a fraction of the graduate civilian pharmacists who applied for active duty could be commissioned. Large numbers, however, because of their patriotism and because they knew "the job must be done," entered the naval service in enlisted ratings. The shortage of manpower and the urgencies of war required that many of these pharmacists be assigned to other than pharmaceutical duties. It is most gratifying, indeed it is a tribute to this arm of the professional world to recall how superbly these men assumed the many diversified duties and responsibilities assigned to them.

In March of 1944, preliminary investigations had disclosed that some measure should be instituted under which graduate pharmacists could be commissioned in the naval service in order to carry on the highly important and specialized functions of the pharmaceutical profession.

The majority of the members of the American Pharmaceutical Association realize the long period of administrative investigations and conferences which were required preparatory to enactment of legislation peculiar to only a small group of the personnel in the military service. You are also aware of the careful efforts exerted during the past three and one-half years by your Committee on the Status of Pharmacists in the Government Service. The first stage of our common goal has finally been attained through the passage of Public Law 337, 80th Congress.

Adapted and condensed from an address presented at the 1947 meeting of the American Pharmaceutical Association.

Dr. Robert P. Fischelis (left) visits with Adm. C. A. Swanson, Surgeon General of the Navy, in Washington. The A. Ph. A. secretary recently inspected West Coast hospital pharmacy facilities of the Army and Navy as a civilian consultant to the Surgeon General.

The second and final step toward this common goal is still ahead of us and I look forward with confidence to our attainment of that goal. It is now possible for us to commission pharmacists in the Pharmacy Section of the Medical Service Corps of the Navy, and to assign these officers to various Medical Department activities where their services can be fully utilized to the best advantage. It is my intention to assign at least one graduate pharmacist to each of our naval hospitals, to our large out-patient dispensaries, to the medical supply depots and medical storehouses where medical supplies are prepared, stowed and distributed to the various units of the Medical Department of the Navy. Graduate pharmacists will be assigned duty with medical research activities, and with the joint Army-Navy procurement offices where their services will be fully utilized in the preparation of specifications and in the procurement and inspection of pharmaceutical products and medical supplies.

The assignment of graduate pharmacists to our Hospital Corps schools, in the capacity of instructors in pharmacy, materia medica and toxicology, will prepare our enlisted Hospital Corpsmen to carry on the duties in the drug rooms and treatment rooms of our smaller stations and ships where it is not practical to assign a commissioned officer of the Pharmacy Section of the Medical Service Corps.

Commissions for Pharmacists

At the present time there are a number of permanent commissions in the Navy's Medical Service Corps available to four-year graduates of accredited pharmacy colleges who served as Navy officers during the war. The law requires that these openings be filled by transfer of Reserve and Temporary officers of the Navy who were separated under honorable conditions and who meet the educational and age requirements prescribed by the President of the United States.

Under Federal law, the earliest practicable date that appointments in the Navy Medical Service Corps could be available to pharmacists who have not served as Navy officers is January 1, 1949, and possibly later. When appointments in the Pharmacy Section are available to civilian candidates, we intend to solicit the cooperation and advice of organized pharmacy, to help assure selection of well-qualified young graduate pharmacists.

I hope to utilize the services of your best pharmacists in an advisory capacity to aid the Medical Department of the Navy in advancing pharmacy in the Navy to its highest peak. In this connection we are pleased to have the counsel of the secretary of your ASSOCIATION, Dr. Robert P. Fischelis, who has been named by the Secretary of the Navy as an honorary consultant to the Bureau of Medicine and Surgery.

Pharmacist to Be Appointed

The Pharmacy Section in the Bureau of Medicine and Surgery will be headed by one or more graduate pharmacists who will be advisers to the Chief of the Professional, and other Divisions and Branches of the Bureau of Medicine and Surgery, and finally to the Surgeon General in all matters pertaining to pharmacy.

The Head of the Pharmacy Section will have direct access to the Deputy Chief, and the Chief of the Bureau of Medicine and Surgery for frank discussions on all matters pertaining to pharmaceutical policies and the practice of pharmacy in the Navy.

We will fully utilize the services of graduate pharmacists as instructors in our medical school at Bethesda in advance instruction of enlisted men who must be utilized as technicians to carry out various laboratory tasks in pharmacy and chemistry under the supervision of trained pharmacists. The instruction given to enlisted personnel in the Hospital Corps is not intended to replace a pharmaceutical education, such as is given in accredited colleges of pharmacy. But it will be recognized that commissioned officers in pharmacy, as in the other specialties of medical care, must have technical assistants upon whom they can rely for routine assistance, just as you must rely on the pharmacy apprentice and the general clerk in civilian pharmacies.

The Medical Service Corps also provides for a Medical Allied Sciences Section and I am cognizant of the fact that increasing numbers of pharmacists who have completed their undergraduate training are going into graduate work which may include pharmacology, chemistry, bacteriology and other phases of the biological and physical sciences. Members of your profession who

have completed a program of graduate study and who have acquired the Doctor of Philosophy or Doctor of Science degree may well find opportunity to continue their researches in the splendid laboratories and research installations of the United States Navy.

Opportunity for Research

There will be a number of places for such men holding graduate degrees, and their basic pharmaceutical training may well be of advantage in certain research programs in the Navy. We welcome the addition of such men to the Medical Service Corps and we trust that the administrative officers of colleges of pharmacy will bear in mind that men with particular aptitudes in the sciences contributory to medicine may enter upon a research career in the Navy.

For a number of years the Bureau of Medicine and Surgery has been cognizant of your desire to eliminate the misnomer which has been applied to hospital corpsmen. The designations, pharmacist mate, first, second and third class, did not actually indicate the type of activity in which this enlisted personnel was engaged, and we can readily understand your desire to distinguish between pharmacists who are graduates of accredited colleges, holding a Bachelor of Science degree, and persons who have had some training in pharmacy but who are technicians and not scientifically trained persons. The original bill, H. R. 3215, provided for a change in designation of the personnel referred to, but because of a previous law governing such matters in the Navy, it was considered best not to specify any designation for such personnel. It was therefore left to the Secretary of the Navy to establish such grades and ratings in the Hospital Corps as may be deemed necessary in the proper administration of the Corps.

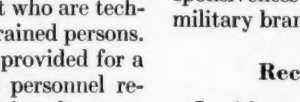
Pharmacists may be assured that we shall endeavor to avoid the conflicting designations to which you have objected in the past, and we have no desire to perpetuate a designation which actually does not describe the functions of the individuals concerned.

Many members of the AMERICAN PHARMACEUTICAL ASSOCIATION have served in various capacities in the naval service from time to time, and are familiar with the organization of the Navy Medical Department. It will be evident to them why it is impossible to practice pharmacy in the Navy identical to civilian practice. Each and every activity of the naval service must be a military component within itself, and consequently in many of the smaller stations and ships, only one, two or three representatives of the Medical Department are authorized. Therefore, we must train our enlisted hospital corpsmen to perform many of the duties which are required of commissioned officers of the Medical Service Corps so that our medical service can stand in readiness at all times to combat any widespread epidemic, or to meet any other local or national emergency.

It is my earnest desire to provide the best medical care to the nation's first line of defense. I believe that the distribution of graduate pharmacists and the utilization of their services, as above mentioned, will greatly enhance the Medical Department of the Navy to render a better medical service. Thus would be realized all practical economies without reducing the effectiveness of performance of the medical or pharmacy services, or diminishing their ready responsiveness to the needs of the respective military branches which they support.

Reciprocal Obligations

I wish to assure this ASSOCIATION that during my term as Surgeon General of the Navy I intend to cooperate with you in every possible way. Our obligations are reciprocal. Neither of us can properly function without the other. It is my earnest desire that the same professional and mutual esteem that has existed for so many generations between the medical and pharmaceutical professions be maintained. The educational standard and training of the members of both of these professions must remain high. I subscribe to your support in the achievement of this accomplishment.



Your Profession

. . . . . in the U. S. PUBLIC HEALTH SERVICE

by GEORGE F. ARCHAMBAULT, Chief

Pharmacy Service, Hospital Division, U. S. P. H. S.

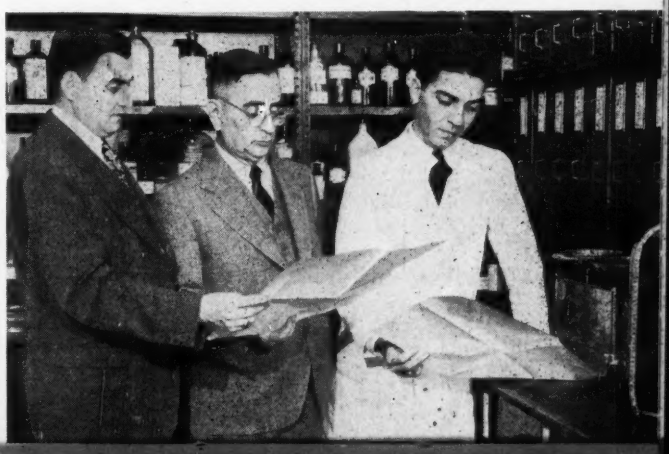
TO PLACE the recently established Pharmacy Service of the Hospital Division in its proper perspective, we should view this development against the background of part of the organizational framework of the United States Public Health Service.

Of the several large hospital systems in the Federal Government, that of the Public Health Service is the oldest. Its history dates back to 1798, in the administration of John Adams, when the Marine Hospital Service was set up by an Act of Congress "for sick and disabled seamen." In 1948 the Public Health Service observes its sesquicentennial.

It is organized around a body of commissioned officers made up of people trained in the public health professions. In time of war these officers become a part of the military forces. The agency has four main bureaus, one of which is the Bureau of Medical Services operating under the direction of Dr. R. C. Williams. This Bureau, the clinical arm of the Public Health Service, has four main divisions: (1) Foreign Quarantine Division, (2) Mental Hygiene Division, (3) Federal Employee Health Division and (4) Hospital Division.

The Pharmacy Service operates under the Hospital Division, of which Dr. Otis L. Anderson is the Chief. The Hospital Division is concerned with the provision of medical and dental services for American merchant seamen, members of the Coast Guard, foreign merchant seamen, the Coast and Geodetic Survey and others designated by law.

Adapted from an address delivered at the 1947 meeting of the AMERICAN PHARMACEUTICAL ASSOCIATION.



At the U. S. Public Health Service Clinic in Washington, D. C., tentative plans for expansion of the pharmacy are reviewed by (left to right) George F. Archambault, pharmacist recently appointed the first chief of the Pharmacy Section of the Public Health Service's Hospital Division; Dr. Carl E. Rice, medical officer-in-charge, Public Health Service Clinic; and Pharmacist Donald E. Wenchhof of the Clinic pharmacy.

It administers this service primarily through its system of 24 Marine Hospitals and 115 medical relief stations, located throughout the United States and its possessions.

At this Hospital Division's headquarters in Washington, there is an Office of Medical and Related Service under Dr. G. H. Hunt, Assistant Chief of the Division. The various professional services in the hospitals and medical stations are responsible to this office in the administration of their functions. The professional services involved are medical and surgical, physical medicine and rehabilitation, out-patient, nursing, dietetic, dental, and more recently the pharmacy service. Each of these services operates under a chief and maintains the necessary headquarters personnel to carry out its functions.

It is the responsibility of the Office of Medical and Related Services to knit into a harmonious and effectual operation the services offered by these public-health professional groups, in order to provide the best of medical care for the patients in the Marine Hospital system.

With this background information, one may understand the need for some unification of the Division's pharmacy service in view of the fact that hospital pharmacies or dispensaries are operated in all of the 24 Marine Hospitals and in many of the medical relief stations. Several years ago the Hospital Division recognized this need for unification and instituted a survey of its pharmacies and pharmacists. In 1945, the AMERICAN PHARMACEUTICAL ASSOCIATION offered its assistance in this survey, and Secretary Robert P. Fischelis, who holds the rank of Senior Pharmacist in the Reserve Corps of the Public Health Service, became a valuable participant in the study.

A Program Crystallized

As a result of this survey a program has crystallized and a pharmacy service was established on June 27, 1947. Its purpose is to raise the level of operations and standards of pharmacy in our hospitals to their proper professional plane and to coordinate these activities with the other professional services.

The over-all objectives of this newly created pharmacy service are:

(1) to establish and institute standards for the effective organization and management of the pharmacies;

(2) to expand the drug manufacturing and compounding done in our hospitals;

(3) to create savings through more efficient procurement, storage and use of pharmaceutical supplies;

(4) to create teaching, training and advisory services; and

(5) to develop professional techniques and procedures.

Summed up in a few words, the newly created pharmacy service is to be devoted to giving new weight and *depth* to the pharmaceutical services throughout the Marine Hospital system. There are certain projects already under advisement.

New Projects

One project is the establishment of a pharmacy service advisory council composed of leaders in our profession. The function of this committee will be to aid in formulating the general over-all professional policy. A second project calls for the commissioning each year of a limited number of pharmacy-college graduates in the commissioned Reserve Corps. The men selected will be those that have demonstrated special interest and abilities for such careers.

Recently an active recruiting campaign for pharmacists in commissioned status was conducted by the Division of Commissioned Officers. This was the first such recruitment for the Service since 1930. From the resulting list will be appointed the pharmacists to serve as commissioned officers in the Regular Corps. Such examinations presumably will be conducted periodically in the future as the needs of the Service indicate.

The Pharmacy Service has set its "sights" —over and above the operation of efficient hospital pharmacies—on the creation of a mechanism whereby our pharmacists may offer greater contributions to the professional staff of the hospital. Such contributions the pharmacist is well qualified to give, by the very nature of his training, education and experience.

Inasmuch as the pharmacy is one of the most extensively used therapeutic facilities in a hospital, it logically follows that the pharmacist should be able to contribute to, and actually participate in, therapeutic, pharmacy and medical staff meetings.

He should also, in our opinion, be a valuable participant in group discussions with dietitians, dentists, interns, nurses and members of the medical staff where such discussions can be enhanced by the services of a well-trained pharmaceutical and technical consultant. In liaison activities such as these, we believe the pharmacist can greatly increase his professional value to an institution.

Hospital administrators are currently interested in pharmacy as never before. What the profession does with its program in the United States Public Health Service and with similar programs elsewhere will, I believe, dictate in a large measure what part the profession is to play in the over-all hospital activities of the future.

This presents a challenge not only to pharmacists who are to participate actively in the program, but to all pharmacists who are interested in the advancement of their profession. Educators, retail pharmacists, hospital pharmacists and others should become alerted to this development and in turn alert young pharmacist-graduates to the careers available in the Public Health Service, so that in the future the profession may take a justifiable pride in that which it has helped to build: a sound pharmacy program in the United States Public Health Service.

Summary

In summary we see—

1. That the United States Public Health Service is the oldest hospital service in the Federal Government—rich in tradition, and now approaching one hundred fifty years of operation.
2. That during the past year a distinct pharmacy service has been established in the Hospital Division to provide the mechanism for better pharmacy service and improved interprofessional relations.
3. That pharmacy is now accorded equal professional status alongside its sister public health professions—medicine, dentistry and nursing.
4. That pharmacists, *serving as pharmacists per se*, are being commissioned as officers in the Regular Corps of the Public Health Service, with ranks equal to those of officers in the other public health professions.
5. That excellent opportunities for careers in hospital pharmacy and public health are available to capable graduates of recognized colleges of pharmacy.

Officers-Elect Announced by A. Ph. A.

RESULTS of the A. PH. A. election of officers have just been announced as follows: Ernest Little, Newark, N. J., president-elect; Mearl D. Pritchard, Buffalo, N. Y., first vice-president-elect; Frederick D. Lascoff, New York City, second vice-president-elect; Hans S. Hansen, Chicago, Ill., member-elect of the Council for a term of one year; Martin E. Adamo, Boston, Mass., Don E. Francke, Ann Arbor, Mich., and Robert L. Swain, New York City, members-elect of the Council for a term of three years.

Officers of the AMERICAN PHARMACEUTICAL ASSOCIATION are elected by a mail ballot submitted to all members in good standing. The ballots are counted by a Board of Canvassers appointed by the president, and the results are certified to the secretary in due course.

The Board of Canvassers, consisting of Charles W. Bliven, chairman, O. F. Goriup and George F. Archambault, met on Dec. 30, 1947, and were assisted in their tabulations by Major Bernard Aabel, U. S. Army Pharmacy Corps, Lt. Comdr. B. F. Duwel, U. S. Navy Hospital Corps, and Harold C. Kinner, secretary of the D. C. Pharmaceutical Association.

The officers elected will be installed at the annual convention to be held in San Francisco the week of Aug. 8, 1948.

The present officers of the AMERICAN PHARMACEUTICAL ASSOCIATION who will continue to function until the San Francisco convention in August, 1948 are: Sylvester H. Dretzka, Milwaukee, Wis., president; Augustus J. Affleck, Sacramento, Cal., first vice-president and Roy L. Sanford, Enid, Okla., second vice-president. The secretary and the treasurer are elected by the House of Delegates.

Your Profession

. . . . . in the VETERANS ADMINISTRATION

by W. PAUL BRIGGS, Chief
Pharmacy Division, Veterans Administration

IN TRYING to present a word picture of pharmacy today in the Veterans Administration we might simplify its outline by saying that pharmacy here is not materially unlike the practice of pharmacy under any other circumstances. This would be true except that the average pharmacy is concerned with the welfare of a few more than two thousand men, women and children, while Veterans Administration pharmacy is directly concerned with the pharmaceutical needs of approximately three million men and women, and indirectly with a potential of 18,000,000 veterans.

The average pharmacy supplies medication for traditional North American diseases and non-combat injuries, while Veterans Administration must cope with the most exotic diseases and bizarre injuries that have been acquired by servicemen from the North Pole to the tropics.

The average pharmacy is confronted with pharmaceutical problems as presented by a relatively limited number of physicians. Pharmacy in Veterans Administration must be geared to the requirements of thousands of full-time physicians and scores of thousands of consultants and fee-basis physicians.

Private pharmacies engage pharmacists on an individual basis through personal interview, while Veterans Administration must engage hundreds of pharmacists through remote control.

Private pharmacies are subject to direct professional control by the responsible pharmacist. Veterans Administration pharmacy, under the policy of decentralization, must function through three distinct levels of control, which obviously brings in elements of interpretation and intent at all points of operation.

Private pharmacies may adjust problems and accomplish changes by direct action, and in large measure these circumstances are dismissed by the pharmacy owner as promptly as they arise. Veterans Administration pharmacy is operated in the spotlight of public view and is subject to criticism, not alone by every discontented taxpayer, but by professional and expert critics.

Most private pharmacies have an average staff of two pharmacists and fill about 6000 prescriptions annually. Veterans Administration pharmacy attempts to operate over 200 pharmacies with more than 350 professional men and women. In addition to routine medications supplied to surgical and medical services and wards, these pharmacies filled approximately four million prescriptions during the past year.

Except for these examples and a few additional differences it would be proper to say that Veterans Administration pharmacy is not greatly unlike pharmacy under any other conditions.

State Association Prescription Service

On June 22, 1946, the original invitations were issued to every state pharmaceutical association to participate in a program designed to provide hometown pharmacy service for eligible veterans. It is a source of encouragement and of great significance in

Adapted and condensed from an address delivered at the 1947 meeting of the AMERICAN PHARMACEUTICAL ASSOCIATION.

the over-all concept of pharmacy's capacity for professional operation, that the 45 states and the District of Columbia participating last year renewed their agreements to provide pharmaceutical services through June 30, 1948, and New Mexico and Hawaii have now joined the program. The only states not operating under the agreement at this time are Virginia and Nevada.

No detailed records of participating pharmacies are maintained in Washington, but it is estimated that 30,000 private pharmacies, filling approximately three-quarters of a million VA prescriptions per year, are now serving in the private-practice care of veterans.

Last year, in describing this program, I indicated that the secretaries of the state associations would be the men and women upon whom would rest the major burden of developing and operating this new aspect of pharmaceutical endeavor. At the same time I expressed confidence that the state secretaries would respond to the challenge and accomplish the job before them. That optimism has been justified, and they have labored long and hard to make the program of hometown pharmacy care a reality and not just another Washington theory. No one who has not had the experience can possibly appreciate the enormous workload thrust upon the state secretaries.

From Apprehension to Appreciation

To deny that there were many heavy hearts and much apprehension as the program began to function, would be to distort the truth. The personnel of Veterans Administration, with only an occasional exception, during the past year have acquired an understanding and an appreciation of the program. Many have gone beyond the normal call of duty to adjust local difficulties and, within the limits of government regulations and procedure, have met and mastered the major problems as they arose.

The original agreement, established in 1946, has been amended in only two respects. Provision has been added for filling prescriptions of authorized dentists, and every participating state accepted this amendment. Each state association was also invited to accept an amendment providing for a 30-day cancellation clause which could be invoked by either the association or the government. The advantage of this amendment is to the state association, enabling it to withdraw from the program if it desires to do so. It extends the same privilege to government but does not imply

Further development of pharmaceutical facilities and service in hospitals of the Veterans Administration is discussed in Washington by W. Paul Briggs (left), chief of the VA's Pharmacy Division, and John J. Zugich of New Haven, Conn., president of the American Society of Hospital Pharmacists.

About 4,000,000 prescriptions were filled last year by more than 200 VA hospital pharmacies. Part of the pharmacy in VA's Mt. Alto Hospital in Washington, D. C., is shown below. Plans call for modern, efficient pharmaceutical service in the new veterans' hospitals projected or under construction.

any intent on the part of the government to abolish the prescription program

During the past year the VA prescription program produced many administrative and operational problems. Most of these were utterly unforeseeable. They arose because of distorted interpretations, interprofessional relationships, active and passive resistance by a small minority, and the strictness of government procedure, particularly with respect to disbursement of public funds.

One serious problem was concerned with the endorsement of prescriptions by physicians without prior and proper authority to do so. This act resulted in a few pharmacists filling prescriptions in good faith for which the government could not make reimbursement. A variety of approaches were tried in attempts to correct this problem with only partial success. Finally, it was found necessary to advise every participating physician in the country that the endorsement of a prescription without proper authorization to do so constituted fraud against the United States, and might require referral to the Department of Justice for prosecution.

We sincerely hope that this extreme penalty will never need to be invoked, but it will be if any physician deliberately and continuously causes pharmacists to suffer financial loss. From the evidence accumulated during the last several months, it would appear that this step has effectively controlled the improper endorsement of prescriptions and I believe will result in the complete elimination of future losses by pharmacists from this cause.

An Old Controversy Renewed

Another problem of some magnitude was concerned with payments to physicians for drugs which they dispensed in the course of their authorized treatment of eligible veterans. State associations were violent in condemning Veterans Administration for permitting dispensing doctors to receive payment for drugs which they supplied their Veterans Administration patients. Dispensing by physicians is a practice which is neither new nor peculiar to the Veterans Administration medical program. It is a problem as old as the professions and is fraught with many difficulties.

Again educational and suggestive approaches were first tried, but these did not completely resolve the issue. Finally, during the past year, all physicians were advised that they would not be reimbursed for routine, non-expensive medication which they dispensed in the course of their authorized treatment of a veteran. In issuing this policy it was made clear that even physicians who regularly dispense may prescribe required medication in the instance of an authorization to treat a veteran.

With no indication to the contrary, it is assumed that this basic policy has eliminated routine dispensing by physicians so far as Veterans Administration patients are concerned. While it was not intended to restrict the right of any physician to dispense medication, this principle may serve as a step in the direction of fixing a dividing line between the professions of medicine and pharmacy with respect to the supplying of medication.

Cooperation Solved Problems

These two problems, which have been but briefly reviewed, illustrate a few of the "hazards" which are to be expected in attempting to translate an idea into a working program at the national level. Other problems of equal importance to pharmacy, and equally challenging to the program as a whole, have been dealt with during the past year. None of these would have been susceptible of adjustment without the patient cooperation of the state secretaries and, in turn, of practicing pharmacists.

The VA-State Pharmaceutical Association agreement requires the establishment of a Review Committee, composed of members chosen by each association. This committee must review all prescriptions before submission to Veterans Administration for payment, and exercise general professional supervision over the services of private pharmacies in so far as their operations under this program are involved. These review committees have a responsibility which must not be taken lightly. They act in a quasi-governmental capacity and are, in theory if not in fact, the representatives of the entire profession of pharmacy as to the quality of professional services and the allowed prices for Veterans Administration prescriptions. It is to the permanent credit of the secretaries and the state association review committees, that they mobilized

quickly, served with enthusiasm and without compensation, and in the course of one year added much to the respect for pharmacy by government.

Before leaving the subject of the state pharmacy plan I want to emphasize that participation by the small-town pharmacy is just as important as participation by the largest or most professional city pharmacy. It is essential that we make available in the more isolated areas the same quality of care to veterans, through cooperative medical and pharmaceutical services, as is received by veterans living in urban centers.

No state association has been urged to join this program. No appeal has been made to patriotism, nor has emphasis been placed upon the dollar value of cooperation. However, it might not be amiss to remind those who practice in non-urban areas that we are much concerned about your cooperation. Even if your pharmacy never receives a prescription through participation in the program, the availability of your services provides comfort to the veterans of your community. Your recorded willingness to participate, if needed, involves no cost or risk to you but will gain for you the appreciation and support of your veteran-patrons.

Just as the Veterans Administration has evolved the hometown pharmacy program for ambulant veterans with war disabilities, we have likewise been developing the hospital pharmacy service for those requiring VA institutional care.

Drug Policy in VA Hospital Pharmacies

During the past fifteen months the entire list of drugs approved for use in Veterans Administration has been reviewed. Some major changes were indicated and most of these have been accomplished. It will require a year or more to prepare a comprehensive drug list and formulary which will meet the varied needs.

A standing Committee on Therapeutic Agents has been established as a staff function of every Veterans Administration field station, and an Executive Committee on Therapeutic Agents operates in the Central Office in Washington. These committees, composed of physicians and dentists with a pharmacist as secretary, meet monthly or oftener, review advances in drug therapy and make recommendations to Washington. While these committees are concerned with all drugs, one of the primary functions is consideration of the use of drugs in the investigational or experimental stage of development. There is nothing static about drug therapy in Veterans Administration today. The most modern and effective therapeutic agents are used in the treatment of veterans. However, adequate safeguards are imposed to protect the veteran from that unhappy state of being a "guinea pig."

Standards of Operation

With the cooperation of other Veterans Administration services very satisfactory plans have become effective for location and space allocations for pharmacies in all types of new VA construction. In most new hospitals the pharmacy will be prominently located on the first floor, opening upon the main traffic corridor. Specifications require the finest type of basic equipment and fixtures. Every pharmacy, new and old, is now complete with excellent pharmaceutical dispensing equipment. Where feasible, small-scale manufacturing equipment has been authorized. Every pharmacy is required to maintain a minimum reference library and receive the leading professional journals. Nearly every Veterans Administration pharmacy has been inspected by the Branch Chief Pharmacist at least once during the past year. Where improvement—such as in location, stock, cleanliness, equipment and services—were indicated, re-inspections have been made. There is every evidence that our pharmacies are now, or shortly will be, a real credit to Veterans Administration and to pharmacy.

Veterans Administration manuals describing the functions of all personnel have been, or are being, completely revised. In these the duties and responsibilities of pharmacists are spelled out, establishing broader functions in keeping with the higher professional requirements demanded of pharmacists. All pharmacies are required to be staffed by qualified, registered pharmacists during regular hours and access to the pharmacy in emergencies is restricted to specifically designated staff physicians. Chief pharmacists are charged with the responsibility for security and issuance of narcotic, alcoholic and habit-forming drugs, and for the necessary special storage, reporting

and dispensing precautions in connection with investigational drugs authorized.

While reporting and record keeping is limited so far as possible, certain essential records must be maintained to insure efficient and economical operations. Requisitioning procedure has been simplified and reserve stocks of drugs are held in the central supply warehouses at most major activities. In large measure, improved pharmaceutical service may be attributed to a better appreciation of pharmacy by allied professional personnel and activity managers, and the esprit de corps of Veterans Administration pharmacists. These conditions are reflections of proper professional recognition, appropriate salaries, and the assignment of clearly defined duties and responsibilities commensurate with the capacity of well-trained pharmacists.

Personnel Standards

The Congress, in establishing the Department of Medicine and Surgery of Veterans Administration, specified by law that new appointees as pharmacists must possess the degree of bachelor of science in pharmacy, or its equivalent. The Administrator has determined that there is no experience equivalent to a bachelor of science degree. It is recognized that many pharmacists, trained before the universal adoption of the four-year course, have by virtue of their experience and initiative become highly competent pharmacists. It is also recognized that some other pharmacists, holding degrees lower than a B.S. have not kept abreast of modern medical science and such men cannot be considered, as a class, professionally equal to men trained under present educational standards. Unfortunately, government personnel standards cannot be written with flexibility to permit acceptance of applicants who are individually qualified, and at the same time provide for screening out men, with identical "paper" qualifications, who have failed to continue their professional growth.

I have been subjected to much pressure and to a great deal of criticism for resisting efforts to lower the educational requirements for new appointees as pharmacists in Veterans Administration. It should be clearly understood that the B.S. standard is not applicable to any Veterans Administration pharmacist who held permanent Civil Service status prior to January 3, 1946. I would remind those who seek to lower the educational standards, that the present grades (up to P-4) and salaries (up to $5,905.20) for Veterans Administration pharmacists are predicated, in part, upon the academically acceptable educational requirement for new appointees. Put more directly, it might well be that failure to maintain present educational standards, by accepting a few men who hold two- and three-year degrees, could result in lowering the recently raised grades and salaries for all Veterans Administration pharmacists, and thereby destroy the very incentive that causes a few to vigorously claim discrimination.

During the past year the Civil Service Commission announced to area offices that examinations could be held for pharmacists in Veterans Administration. Applicants for this examination must meet all requirements for appointment, including a bachelor of science degree from a four-year course in pharmacy, and current registration in one of the states. Local authority exists to delay giving the examination when, in the judgment of the responsible officials, the personnel situation so justifies. When the examination is given, a register of applicants qualified for probational appointment will be established at area levels rather than at the national level.

Prior to announcing this examination consideration was given to the validity of the traditional type of written examination. It was felt that the present educational requirement, and the selective processes of state board of pharmacy examinations, would establish technical qualifications at least as well as any written examination that could be devised. Physicians and other professional personnel in Veterans Administration are not subjected to written examination for appointment, but are evaluated on professional achievement in terms of education, specialized training and experience. This same professional type evaluation has been agreed upon as the basis for examinations for Veterans Administration pharmacists.

During the period of the national emergency, in order to fill positions, Veterans Administration, in common with many other agencies, accepted personnel for temporary and war service appointment without com-

mitment as to qualification for future permanent appointment. Veterans Administration currently employs some pharmacists who do not hold a B.S. degree and who are classified as either temporary or war service personnel. Under present standards pharmacists in this category cannot qualify for permanent status. The professional examination, to be given for pharmacists in the near future, will serve to give permanent status to present temporary personnel who are fully qualified, but probably will not disturb temporary personnel who do not hold a B.S. degree.

In this manner qualified pharmacists will be eligible for grade promotions and other benefits of government service which are open only to permanent status employees. The fact that a pharmacist, currently serving in a temporary status and not qualified for permanent status, will be unable to take the examination does not of itself imply that such personnel will be immediately released. On the contrary, it is likely that such pharmacists will be continued in service until some distant date when an adequate register of fully qualified pharmacists is established.

Training, Research and Control

Tentative plans have been developed, and are now awaiting administrative approval, to establish centers for in-service refresher and orientation training of Veterans Administration pharmacists. Proposals have been submitted which may enable B.S. graduates to obtain all or a portion of the practical experience required for registration as interns in Veterans Administration hospital pharmacies. It is hoped that in the near future we can establish postgraduate training for a few career Veterans Administration pharmacists, and provide for annual attendance of selected pharmacists to special hospital pharmacy courses and seminars. Reference to these plans for training is somewhat premature in the sense that, while accepted as sound and desirable, they have not received final approval nor have funds been allocated for implementing them.

Some pharmaceutical research is being carried on in Veterans Administration activities. This is a new phase of pharmacy service in Veterans Administration and, while only limited accomplishment has been made to date, we have reason to anticipate worth-while contributions in the future. Collaborative studies with colleges of pharmacy may be arranged later and, as a matter of policy, every possible encouragement will be given qualified personnel to engage in worth-while pharmaceutical research.

All drugs procured on specification are subjected to control laboratory testing before issuance. At present this service is being provided by the joint Army-Navy facilities in New York. With the expansion of VA this has become a major operation and will require further development.

The pharmaceutical industry has been helpful to Veterans Administration in bringing to the attention of medical and pharmaceutical personnel information on worthwhile drug products that are the end results of their research projects. As a part of this program many manufacturers, at their request, have been authorized to establish educational exhibits and display technical films in our various field stations. Through these educational efforts our physicians and pharmacists have become intimately acquainted with the many new and valuable drugs that have been introduced during the past few years. The manufacturers have also been helpful in making available in our various activities technical and professional literature on their products.

Conclusion

At the 1946 convention of the AMERICAN PHARMACEUTICAL ASSOCIATION I said, as part of my remarks:

"... In my judgment pharmacy in Veterans Administration enjoys respect from all quarters and abundant opportunity to demonstrate its capacity for professional service. Organized pharmacy has cause to be gratified by the favorable position that it holds. Veterans Administration, and more particularly General Hawley, has established pharmacy as an integral part of the Department of Medicine and Surgery. A sound working basis for pharmacy service has been provided. Very properly, Veterans Administration now expects in return outstanding professional services from pharmacy as its contribution to the very necessary, best-conceived and most extensive medical program in history."

It may still be too early to evaluate fully, or weigh the results, of such a new and extensive program. But in my judgment the magnificent cooperation of all elements of pharmacy has made possible the prompt achievement of nation-wide pharmaceutical service for veterans in pace and in parallel with medical services.

INFORMATION SERVICE

Members of the American Pharmaceutical Association are invited to submit their professional problems to the Journal, 2215 Constitution Ave., N. W., Washington 7, D. C., giving all pertinent details. Advisory service is provided by the A. Ph. A. library and technical staff and the Journal panel of technical consultants.

FRAZER'S SOLUTION

We have a request for "Frazer's Solution, Half Strength." I believe this was used for mycosis in the Army.—F. W., District of Columbia

According to our information, Frazer's Solution, Half Strength, as used in the Medical Department has the following formula:

Potassium iodide	17.5
Salicylic acid	17.5
Boric acid	25
Iodine, crystalline	12.5
Alcohol, 95%	300
Distilled water, *q. s.*	1000

MAKING MILK OF MAGNESIA

Please furnish me with the formula and process for making milk of magnesia from powdered magnesium oxide.—R. D., New York

Working directions for preparation of milk of magnesia from powdered magnesium oxide are given in the British Pharmacopœia as follows:

Magnesium sulfate	47.5 Gm.
Sodium hydroxide	15 Gm.
Light magnesium oxide	52.5 Gm.
Distilled water, sufficient to produce	1000 ml.

Dissolve the sodium hydroxide in 150 ml. of distilled water, add the light magnesium oxide, mix to form a smooth cream, and then add sufficient distilled water to produce 2500 ml. Dissolve the magnesium sulfate in 2500 ml. of distilled water. Pour the suspension in a thin stream into the sulfate solution, stirring continuously. Allow the precipitate to subside, and remove the clear liquid; transfer the residue to a calico strainer, allow to drain, and wash the precipitate with distilled water until the washings give only a slight reaction for sulfates. Mix the washed precipitate with sufficient distilled water to produce the required volume.

This procedure results in a product that should comply with the requirements of the U. S. Pharmacopœia. The procedure described in U. S. P. X for making milk of magnesia from magnesium sulfate and sodium hydroxide appears to be a more convenient method.

A concentrated milk of magnesia paste that produces a preparation meeting U. S. P. standards, when mixed with water, is supplied by Whittaker, Clark and Daniels, Inc., 260 W. Broadway, New York. The paste yields approximately 45 gallons of milk of magnesia from 100 pounds of the starting product. You may be interested in investigating this material for manufacturing milk of magnesia.

A PROBLEM OF pH

The following prescription when first compounded is clear red. After a few minutes a crystalline precipitate forms. It also turns to an amber color within seventy-two hours.—P. A., New York

Sod. phenobarbital	*gr. viii*
Elix. three bromides	℥ *iii*
Sig. ℥ *i o. d.*	

The precipitate which forms upon addition of sodium phenobarbital to the bro-

mides is phenobarbital. This is doubtless due to the fact that a *p*H of 9 or higher is necessary to keep phenobarbital dissolved in water. Three bromides elixir usually has a *p*H of between 7 and 8. The difficulty you have experienced can be overcome by the addition of a few drops (5 or 10) of sodium hydroxide solution (1:20).

We have no explanation to offer concerning the change in color. Samples we prepared did not change color after standing five days.

TUBING FLUID FOR CAT GUT

What is used as a tubing fluid for cat gut?—S. G., Ohio

The character of tubing fluid appears to vary with the manufacturer and with the character of the cat gut.

The following tubing fluids are used in some preparations:

I. *For non-boilable cat gut*

Isopropyl alcohol	90	%
Sodium nitrite	0.1	%
Phenylmercuric benzoate	0.025	%
Water, *q.s. ad*	100	%

II. *For boilable cat gut*

a. Xylol

b.

Alcohol	76	%
Isopropyl alcohol	20	%
Sodium nitrite	0.025	%
Phenylmercuric benzoate	0.025	%
Water, *q. s. ad*	100	%

TRIETHANOLAMINE TOXICITY

Can triethanolamine be used as an emulsifying agent in medicinals for internal use, and for nasal and other mucous use?

I wish to make suitable nose drops for newborn babies, using a liquid paraffin base. What should be used in this as a mild antiseptic.—J. C., South Africa

It is difficult to give a categorical answer to the question on toxicity. It is generally agreed that triethanolamine is not very toxic, as can be seen from the data of D. H. Kindsbatter, *Journal of Industrial Hygiene and Toxicology*, **22**, 206 (1940). We understand, however, that it may not be used in this country as a constituent of foods. One government authority indicates that it may be used in small quantities over a short period of time in internal medications, but that each product must be judged on its own merit.

This also applies to use of triethanolamine in nasal preparations and other preparations applied to the mucous membrane. It appears that triethanolamine is about as irritating as a 10% solution of ammonia. Consequently, its use in such preparations is determined by the degree of dilution and the amount of neutralization.

We would not attempt to answer your question concerning nose drops with a liquid paraffin base, since in this country the use of oily nose drops, especially for children, is frowned upon.

BICHLORIDE ON THE SCALP

Can this prescription be used without harmful results? To what amount should the mercury salt be reduced?

Mercury bichloride	*1 part*
Glycerin	*10 parts*
Alcohol to make	*100 parts*

To be applied to affected areas on scalp for dandruff.

—*A. T., Minnesota*

The following concerning mercuric chloride is quoted from *A Manual of Pharmacology* by Sollmann: "On the skin concentrations of 1 to 5% produce irritative vesication and corrosion; sensitive skin may be inflamed by the most dilute solutions used in surgical operations. The absorption from the intact skin may be sufficient to produce systemic poisoning. Solutions of 1:1000 to 1:200 are used in the skin diseases for antisepsis and to produce exfoliation of the epidermis."

In *The Pharmacological Basis of Therapeutics* by Goodman and Gilman, the following statement appears: "For getting rid of parasites such as the head louse or crab louse, solutions of mercuric chloride in 50% alcohol are effective. For the scalp a 1:500 solution is employed and for the body a 1:1000 solution."

SOURCE OF TWEEN 80

Please inform me who manufactures an emulsifying agent known as "Tween 80."—V. P., Texas

The manufacturer is the Atlas Powder Company, Wilmington, Del.

Tolerances

. . . . . .from p. 30

a tolerence of ±10%, they are so large that not many can be brought within a tolerance as high as ±20%. The method based upon twice the average deviation indicates that a reasonable tolerance would be ±30%. This is too high.

I am convinced that with phenol preparations the high variations are the results of two main factors which apply more strongly to certain pharmacists. These factors are fear of handling phenol and the fact that the preparations are to be used externally or in body cavities. The influence of these factors, and the other controllable factors discussed elsewhere, can be decreased only by education.

Summary

1. The main reasons for giving active consideration to widening the present tolerances for many extemporaneously compounded preparations are reviewed.

2. Graphic arrays of serial data indicate roughly that a "reasonable" tolerance for most extemporaneously compounded preparations may be about ±15%.

3. A method for more exact determination of a reasonable tolerance for any one type of preparation is described.

4. Reasonable tolerances for a number of preparations are determined. Similar tolerances for similar types of preparations appear to be indicated.

5. Limitations of the applied method for the determination of reasonable tolerances are discussed. The need is pointed out for careful further study of the factors involved in failures to meet present tolerances.

References

1. Goldstein, S. W., THIS JOURNAL, 8, 542 (1947).
2. Goldstein, S. W., *Ibid.*, 8, 599 (1947).

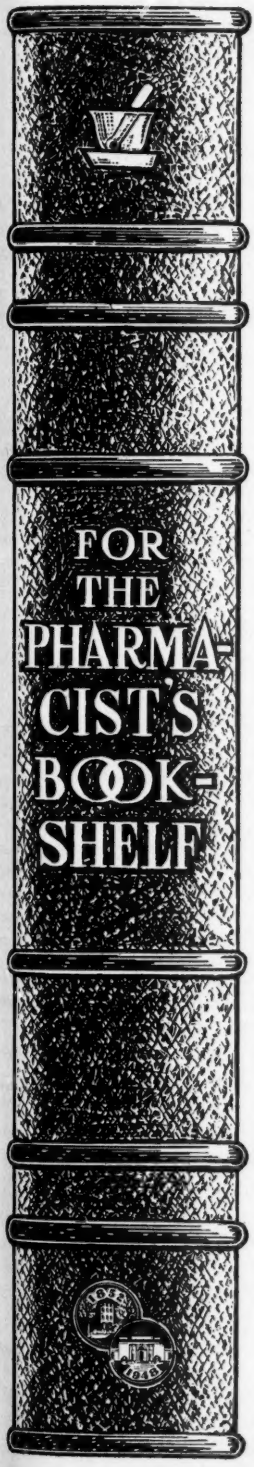
TABLE 2—RELATIONSHIP BETWEEN AVERAGE DEVIATION × 2 AND TOLERANCE

Preparation	*No. of Samples*	*Percentage of Samples Substandard by Average Deviation × 2*	*Percentage of Samples Substandard at Equivalent Tolerance*	*% Substandard at Tolerance*
Acetic acid 10%	57	15.8	15.8	±15%
Boric acid solution N. F.	66	16.6	16.6	−15%[a]
Chloroform spirit N. F.	51	19.6	19.6	±15%
Diluted hydrochloric acid U. S. P.	252	16.3	16.7	±15%
Potassium iodide solution N. F.	264	12.1	13.1	± 7.5%
Potassium permanganate solution 0.5%	50	12.0	12.0	±20%
Potassium permanganate solution 2.5%	81	14.8	16.0	±15%
Potassium permanganate solution 3.0%	72	11.1	11.1	±15%
Silver nitrate solution 1%	192	10.4	10.9	±15%
Silver proteinate solution 0.5%	74	10.1	10.8	±15%
Salicylic acid ointment 2.5%	131	11.4	11.4	±17.5%

[a] Official tolerance. With a ±20% tolerance 15.2% of the samples are substandard.

TABLE 3—ACCURACY OF COMPOUNDING IN METROPOLITAN AND OTHER AREAS

Preparation	*—Metropolitan Area—*		*—Counties—*	
	No. of Samples Tested	*Percentage Substandard*	*No. of Samples Tested*	*Percentage Substandard*
Acetic acid 10%	42	26	15	33
Boric acid solution N. F.	37	14	29	21
Dild. hydrochloric acid	27	45	23	31
Lugol's solution	43	14	36	11
Phenol in petrolatum 3% and 5%	27	37	12	58
Potassium iodide solution N. F.	111	29	84	29
Potassium permanganate solution 2.5%, 3%, 3.5%	68	22	65	14
Salicylic acid in petrolatum 2.5%, 3%, 7.5%	70	27	50	22
Silver nitrate solution 1%, 2%	113	16	73	21



THE NEW DISPENSATORY

Publication of a new edition of the *United States Dispensatory* is always an event of pharmaceutical interest. Pharmacists are well aware of the nature and scope of this standard reference volume, but the extensive revision represented by the 24th edition makes it especially worthy of attention and purchase.

The 1947 edition includes pharmaceutical and medical information on the drugs described in U. S. P. XIII, N. F. VIII, the latest British Pharmacopœia with its seven addenda, and also on many unofficial drugs. Even a casual comparison of the 1947 *Dispensatory* with one of the early editions dramatically illustrates progress made in drug therapy during the past century.

In almost every instance the *Dispensatory* monographs have been rewritten, enlarged and thoroughly modernized in the edition just issued. There are five main divisions: (1) Monographs on official drugs of the United States and Great Britain, arranged by English titles. Inclusion of trade marks and foreign names of many of these drugs adds considerably to the volume's usefulness. (2) Monographs on unofficial drugs. Here we find excellent résumés of the present status of such therapeutic agents as the antibiotics, antihistamine drugs, estrogens and radioactive substances. (3) Brief descriptions of official general tests and processes and data on reagents, test solutions, volumetric solutions and clinical laboratory reagents. (4) Veterinary uses and doses of official and unofficial drugs. This represents a new departure in the *Dispensatory* and one that should prove helpful to pharmacists interested in expanding professional service in this field. (5) Tables of value in the practice of pharmacy.

Documentation and an excellent index further extend the general usefulness of the *Dispensatory* for the practicing pharmacist's reference shelf.

UNITED STATES DISPENSATORY, 24th Edition—Arthur Osol and George E. Farrar—*J. B. Lippincott Co.*, Philadelphia, Pa., 1928; pp., $16.50.

A LEADER AMONG HOSPITAL FORMULARIES

The *Formulary* of the University Hospital at Ann Arbor, Mich., has become a leader in its field. The second edition just issued was again edited by Don E. Francke, chief pharmacist, and prepared with the assistance of various members of the hospital staff.

The scope and rationale of drug therapy have had increased attention from those responsible for hospital policies, which in turn stimulates interest in the institutional formulary. Such a formulary usually reflects the particular needs of a specific hospital, and its general usefulness is thereby limited. However, the substance and the excellent arrangement of the University Hospital *Formulary* justify its wide distribution both as a publication model and as a source of information. In fact a number of hospitals already have adopted this volume *in toto* for their own use.

The *Formulary* is divided into two sections. The first deals with weights, measures and conversion tables, practical information on prescription writing and a table of abbreviations. The second section is devoted to monographs on medicinal agents classified according to their actions and in part according to uses. Descriptions, dosage and preparations are given in a concise style.

In this edition a section has been added on amino acids, and there are monographs on such recently introduced drugs as Methadon, dihydroergotamine, Metopon and propyl thiouracil. There have also been numerous other changes and revisions throughout the book.

UNIVERSITY HOSPITAL FORMULARY (Ann Arbor, Mich.)—Don E. Francke—*University Lithoprinters, Inc.*, 54 E. Cross St., Ypsilanti, Mich.; 422 pp., $3.75.

A. Ph. A. Branches

LOCAL BRANCHES

SOME branches have avoided the problem of catch-as-catch-can programs by mapping out the season's features in the fall. This eases the pressure on speakers and program committees and has a salutary effect all around—including new membership appeal.

The **Northern New Jersey Branch** has been doing this for some time. A. PH. A. headquarters has just received from Branch President William H. Levine a circular letter setting forth the plans and program of the Branch for the coming year. It reflects the well-balanced schedule that comes from advance planning. Subjects for principal speakers include: unions and professional organizations in pharmacy, recent therapeutic developments, proteins and amino acids, pharmaceutical aspects of geriatric medicine and a presentation of historical stories on early pharmacy in New Jersey. A spring meeting is reserved for seminar lectures sponsored jointly by the Branch and the Rutgers University College of Pharmacy. The program highlights of the season are announced to members on a wallet-size card, with the names and addresses of incumbent officers printed on the reverse side.

One hundred members of the **Chicago Branch** attended the first meeting of the season, according to Hans S. Hansen, the secretary-treasurer. A memorial resolution was passed concerning the death of Dr. Elmer H. Wirth and honoring his many contributions to pharmacy and the Branch. Dr. Earl R. Loew, professor of pharmacology and therapeutics at the University of Illinois Medical School, addressed the group on "Present Status of Anti-Histamine Drugs." Word also arrives that Branch Secretary Hansen, a hospital pharmacist, has been appointed administrator of Grant Hospital.

Here are the new officers for the 1947–48 term installed at the October session of the **Puerto Rico Branch:** Adolfo F. Legrand, president; Waldemar Schumburg, vice-president; Antonio Torres-Diaz, secretary; and Rosendo Rios-Vega, treasurer. A membership drive has been initiated by President Legrand. Further investigation of the possibility of translating the N. F. into Spanish is also under way.

The program of the November meeting of **Northwestern Ohio Branch** included a guest speaker and an animated film. Dr. H. H. M. Bowman, Toledo University Department of Biology, supervised the showing of a film on "Physiology of Fertilization" and addressed the group on hormone therapy.

Members of the **Northern New Jersey Branch** heard a report by Delegate William Richardson on the A. PH. A. convention at their October meeting. Dr. Paul C. Olsen, professor of economics at the Philadelphia College of Pharmacy and Science, was the principal speaker of the evening. He discussed "The Growth of Trade Unions in Pharmacy."

The November meeting of the **Western New York Branch** was preceded by a dinner sponsored by the Branch and the Western New York Retail Druggists Association. A discussion of "Institutional Concepts of Retail Pharmacy" by Dr. R. L. Swain, member of the Council of the A. PH. A. and editor of *Drug Topics*, highlighted the program.

Interesting talks have marked the regular meetings of the **Philadelphia Branch.** At the October session, Dr. Karl H. Beyer, director of pharmacological research in Sharp and Dohme's Medical Research Division, spoke on "The Inhibitory Effect of Caronamide on Penicillin Excretion." Members attending the November meeting heard Dr. John A. Kolmer, professor of medicine at Temple University speak on synergies.

STUDENT BRANCHES

NEW officers chosen by **University of Texas Branch** are: A. Carter Beach, president; Frank Pineda, vice-president; Quida Gray, secretary; and Charles H. Rhodes, treasurer. Vance Smith was named parliamentarian; and Arthur Radcliff, reporter-editor. W. T. Clark, Jr., was elected to serve for one semester as executive committeeman and Paul Hoge will serve three semesters.

Two films were shown at the first meeting of the **State University of Iowa Branch:** "Dream Flower—The Poppy" and "Passing Parade," the latter a dramatization of the discovery of vitamins.

Aiming at increased membership, **Fordham University Branch** has appointed a new program committee charged with furnishing interesting programs for the year and publicizing branch activities.

At the October meeting of the **University of Pittsburgh Branch** new officers were elected as follows: Casimer C. Iannuzzi, president; George B. Hook, first vice-president; Donald C. Kruper, second vice-president; Bernard Danenberg, treasurer; and Mary Lou Shilen, secretary.

Members of the **Washington State College Branch** recently sponsored a "Pharmacy Mix" for all students of pharmacy. A membership drive is also being planned by the group, with 100% membership among pharmacy students as the goal.

Typical Days

FROM THE SECRETARY'S NOVEMBER DIARY

4th Not a moment to spare all of yesterday for the monthly inspection of building and grounds, because of heavy mail, staff work and many callers. Today the grounds seemed especially attractive with the war memorial nearing completion and sodding of the broken ground under way. The sharp eyes of the architect detected some defects in the bronze casting, which depicts the war activity of pharmacists from '76 to '46. And so further work is necessary. Discussions with the Navy and long distance conversation with President Dretzka, John Dargavel and others.

5th This day and the next filled with appointments to discuss this and that, including the most satisfactory investment of surplus funds which are surplus for but a short period; the best ways and means for improving appearance and typography of THIS JOURNAL; and how to get more free riders on the A. PH. A. pharmacy train to buy tickets and share the expense.

7th Now finishing things for the week in a hurry in order to reach New York in time to join the Society of Chemical Industry (American Section) in doing honor to George Merck, who is this year's recipient of the Chemical Industry Medal. A fine turnout of colleagues and friends of Mr. Merck, who modestly gave credit to the Merck organization for his accomplishments and took the gentle ribbing of novelist John P. Marquand with good grace. Mr. Marquand performed superbly and set a new high for character and personality sketching by word of mouth. If what he said is to be printed, it will be worth reading.

8th From New York to Red Bank via Trenton for the week end, and trying hard to ward off a cold. At Trenton a chat with N. J. Ph. A. Secretary Debus and long distance talks with Deans Hewitt and Tom Rowe about A. PH. A. student and local branches and public relations activities, respectively.

9th On the way back to Washington via Trenton conferred with Advertising Manager John Winter and looked in on the well-attended meeting of the N. J. Ph. A. House of Delegates which was in progress all afternoon. To Washington in time to review Saturday's mail and get a good start for Monday morning.

10th Staff conferences and a staff meeting amid the rush of Monday mail. It takes all of Monday morning to start the correspondence moving in the direction of completion of the many requests for information and services. Progress reports from Army and Navy on the drafting of regulations for the Medical Service Corps.

11th A holiday for some but it is sometimes questionable whether the purpose of holidays is actually accomplished. Some day somebody will work out a way of accomplishing the objectives of a holiday without disrupting the work.

12th The day pleasantly divided by joining Dr. Powers and Messrs. Cusick and Maurina of the scientific staff of Parke, Davis & Company at luncheon, where the discussions were very interesting and enlightening. Late in the afternoon came Council Chairman Beal to divide some spare time with staff members needing advice. Council and publication business were topics for discussion with Dr. Beal at dinner and left him at the Statler nursing a departing cold.

13th In the afternoon with George Beal to the Department of Commerce to check on the value of microfilms revealing German drug and chemical data. Later a visit from S.K.F.'s John Hammer, discussing antiques and, later, more modern subjects at dinner at the Occidental. This was also a day of preparation for the Drug Trade Conference Executive Committee and Legislative Committee meeting on the morrow.

Late at night a call from an irate grandfather named Swain who thought he had a reservation until he walked up to the Statler desk at about 11 p. m. and was informed otherwise. The classic letter of the church treasurer demanding dues was mild in its language compared to what the Statler room clerk heard that night, but it all ended well in de luxe quarters at the Washington about midnight.

14th Today a snappy meeting of the Drug Trade Conference Executive Committee, deciding on the program for the full Conference annual session on December 10 and considering changes in the rules which would break the unanimous consent policy. After luncheon at the Washington Hotel, endeavoring to complete the business of the Committee on Uniform Drug Legislation, but running into snarls because of inability of some delegates to separate principles from business interests.

17th Combined house-hunting with efforts to bring back work up to date over the week end and not succeeding too well at either. A busy Monday, what with the heavy mail, a heavy

cold and heavy preparations for a combined meeting of the Committees of Six and Constitution and By-Laws, which are reviewing the A. PH. A. structure. It was good to call it a day and go to sleep before the B. & O. left Union Station for Pittsburgh at midnight.

18th Up before breakfast and out of the station by 7:20, taxiing through the industrial haze to the University Club to join Beal, Christensen and Moulton at breakfast. Then to the beautiful Board Room of the Mellon Institute, where the breakfasters and Muldoon, Darnell and Webster all joined for a long and productive session reviewing A. PH. A. organic law and the by-laws.

The day's work interspersed with an excellent lunch and dinner at George Beal's University Club; also, pleasant visits from Director Weidlein and Assistant Director Hamor of Mellon Institute during the day. In the evening enjoying Muldoon's stories and jibes with Webster and Beal before departing on the sleeper for Washington.

19th The B. & O. arriving ahead of schedule which means 7:15 a. m. and insisting that all must leave the train on arrival. Time enough for breakfast and to reach the office before official opening. A visit from A. S. H. P. President John Zugich who has lots of energy and good ideas for the future of his organization.

In the afternoon to the office of Pharmacy Director W. Paul Briggs at V. A. for a meeting on the status of pharmacists. All were in agreement that standards must not be lowered. In the evening to dinner with Zugich and Gloria Niemeyer, and then all working on the Hospital Pharmacy Division program.

20th Much cleaning up of accumulated work and issuing the bulletin on status of pharmacists in V. A. A final luncheon session with Zugich and agreement reached on the next steps in all parts of the program for promoting hospital pharmacy.

23rd Returning to Washington with Tom Rowe from New Jersey and talking over much of the Pharmacy Week and public relations program as the Pennsylvania clicked off the miles between Trenton and Washington.

24th A big day with Bert Mull, Walter Chase, Tom Rowe, Jean Henderson and Glenn Sonnedecker, who gave the Pharmacy Week and public relations program a fine-tooth combing. Lunch at the headquarters building while work was in progress. At that, the job was only partially completed when the visitors had to be transported in a heavy rain to the station at the height of Washington's traffic congestion. With Justin Powers at the wheel of his trusty Dodge and the police exercising due leniency, there were no casualties and several minutes to spare as the car rounded the last curve on two wheels and deposited its passengers right side up on the depot platform.

25th Now working with landscape artists and gardener to plan arrangement of the shrubbery back of the newly installed war memorial. The evergreens planted fourteen years ago have supplied a natural background of beautiful growth without much planning. All the late morning and afternoon exchanging tales of woe with Messrs. Fleck and Riddagh of the Mack Printing Co. The net result is higher paper and printing costs for 1948 and no guarantee when the rise will end.

26th Among the visitors was E. E. Leuallen of Philadelphia who spent some of his spare time with us one summer assisting in the N. J. Board of Pharmacy office and found out what makes pharmacy law enforcement tick.

28th After the Thanksgiving Day holiday, much attention to a two-day delivery of mail from the post office, and late in the day to visit the exodontist, who does his work expertly but cannot be held responsible for the aftermath.

29th A good day for individual staff conferences to clear up many accumulated jobs before the month ends, and we begin to think of Christmas and budgets and what happened to the 1947 New Year resolutions.

HOSPITAL PHARMACISTS ELECT OFFICERS FOR 1948-49 TERM

W. Arthur Purdum, chief pharmacist at Johns Hopkins Hospital, Baltimore, has been elected president of the American Society of Hospital Pharmacists for the 1948–49 term. Other officers-elect announced by the Society are: Geraldine Stockert, Long Branch, N. J., vice-president-elect; J. R. Cathcart, West Chester, Pa. secretary-elect; Sister Jeanne Marie, Youngstown, Ohio, treasurer-elect.

Present officers of the Society continue to serve until installation of officers-elect at the annual convention to be held in San Francisco the week of August 8, 1948.

The membership of the American Society of Hospital Pharmacists also voted to amend the Society's Constitution and By-Laws to change the title "chairman" to "president" and "vice-chairman" to "vice-president."

CRYSTALLINE PENICILLIN SODIUM

Heyden

CRYSTALLINE PENICILLIN SODIUM HEYDEN 100,000 UNITS HEYDEN CHEMICAL CORP.
CRYSTALLINE PENICILLIN SODIUM HEYDEN 200,000 UNITS HEYDEN CHEMICAL CORP.
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STABLE - -
Three-year expiration date

Requires no refrigeration*

CONVENIENT
May be carried about safely in physicians bag

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*Penicillin in solution must be used immediately, or stored in refrigerator.

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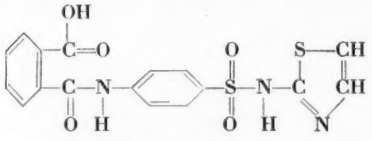
This advertisement is currently appearing in medical journals

NNR

PRODUCTS RECENTLY ACCEPTED BY THE A. M. A. COUNCIL ON PHARMACY AND CHEMISTRY

PHTHALYLSULFATHIAZOLE.— Sulfathialiine—Sharp & Dohme.—2(N-phthalyl-sulfanilamido) thiazole.—$C_{17}H_{13}O_5N_3S_2$.—M. W. 403.42.



Phthalylsulfathiazole may be prepared by the condensation of sulfathiazole with phthalic anhydrid.

Actions and Uses.—Phthalylsulfathiazole is a derivative of sulfathiazole closely related to succinylsulfathiazole used for the oral treatment of infection in the intestinal tract. Unlike the latter, however, it is not recommended for acute bacillary dysentery or elimination of the carrier state. It is used in the management of inflammatory disease of the intestinal tract and for the reduction of coliform bacteria prior to operative procedures involving surgery of the small intestine or colon. There is clinical evidence to warrant its use as an adjunct to other measures in the control of both acute and chronic ulcerative colitis and regional ileitis.

Phthalylsulfathiazole is absorbed to the extent of only about 5 per cent and rarely reaches a concentration in the blood of more than 1.5 mg. per hundred cubic centimeters with doses usually prescribed. This proportion is excreted by the kidneys, mostly conjugated, which forms soluble salts in acid urine. The possibility of crystalluria is therefore remote. No toxic manifestations have been observed with therapeutic doses except where sensitivity to sulfonamides was previously acquired.

Dosage.—Orally, in tablet form, from 0.05 to 0.1 Gm. per kilogram of body weight daily. This is given in equally divided doses at intervals of four, six or eight hours, depending on the total dose to be administered. The average daily adult dose is provided by eight to twelve 0.5-Gm. tablets and should not exceed 8 Gm. Smaller doses, as indicated by response, may be continued for initial periods up to eight weeks or even longer for the management of ulcerative colitis. As a preliminary adjunct to intestinal surgery, an initial dose of 0.125 Gm. per kilogram followed by the same amount daily in divided doses given at equal intervals, comprising three, four or six doses per day, is given for a period of three to five days prior to operation.

Tests and Standards.—

Phthalylsulfathiazole occurs as an odorless, white or faintly yellowish white, crystalline powder possessing a slightly bitter taste. It may slowly darken on long exposure to light. It is slightly soluble in alcohol, very slightly soluble in ether, practically insoluble in chloroform and in water; it is readily soluble in sodium or potassium hydroxide solution, in 10 per cent ammonia solution and in concentrated hydrochloric acid.

For tests and standards see *J. Am. Med. Assoc.*, 135: 433 (1947).

Sharp & Dohme, Inc., Philadelphia

Tablets Sulfathalidine: 0.5 Gm.

U. S. Patents 2,324,013 and 2,324,015. U. S. trademark, registered.

ETHINYL ESTRADIOL (See New and Nonofficial Remedies, 1947, p. 352).

The following dosage form has been accepted:

Schering Corporation, Bloomfield, N. J.

Tablets Estinyl: 0.02 mg. and 0.05 mg.

AMINOPHYLLINE (See New and Nonofficial Remedies, 1947, p. 305).

The following dosage form has been accepted:

Ingram Laboratories, Inc., San Francisco

Ingraloids Aminophylline: Ampuls 0.243 Gm. in 2 cc. or 10 cc. and ampuls 0.486 Gm. in 2 cc., 10 cc. or 20 cc.

PENICILLIN IN OIL AND WAX (See New and Nonofficial Remedies, 1947, p. 144).

The following dosage forms have been accepted:

Premo Pharmaceutical Laboratories, Inc., New York

Penicillin Calcium in Oil and Wax: 300,000 units per cc., 2-cc. and 5-cc. glass syringes and 10-cc. vials. Calcium penicillin suspended in sesame oil containing 4.8 per cent (*w/v*) white wax, U. S. P.

Crystalline Penicillin Sodium in Oil and Wax: 300,000 units per cc., 5-cc. and 10-cc. vials. Sodium penicillin suspended in sesame oil containing 4.8 per cent (*w/v*) white wax, U. S. P.

E. R. Squibb & Sons, New York

Crystalline Penicillin G Sodium in Oil and Wax: Double-cell cartridge, one cell containing 1 cc. sterile crystalline penicillin G sodium, 300,000 units, in peanut oil with bleached beeswax 4.8 per cent (*w/v*) and one cell containing sterile aspirating test solution with 0.5 per cent chlorobutanol. Packaged with plastic syringe.

SOLUTION OF EPINEPHRINE HYDROCHLORIDE (See New and Nonofficial Remedies, 1947, p. 220).

The following dosage form has been accepted:

Brewer & Company, Inc., Worcester, Mass.

Solution Epinephrine Hydrochloride 1:1000: 1-cc. ampuls. Each cubic centimeter contains epinephrine hydrochloride 1 mg. in isotonic solution of sodium chloride with sodium bisulfite 0.1 per cent.

New A. Ph. A. Members

THE ASSOCIATION EXTENDS A CORDIAL WELCOME TO THE FOLLOWING MEN AND WOMEN WHO WERE ACCEPTED FOR ACTIVE MEMBERSHIP DURING THE MONTH PRECEDING PREPARATION OF THIS ISSUE.

ALABAMA

White, Dan B., Birmingham

ARIZONA

Shenkarow, L. E., Tucson

CALIFORNIA

Coger, C. W., Bellflower
Garbrick, Gray E., San Francisco
Haueisen, Otto F., Sr., Richmond
Kalionzes, Peter W., Santa Monica
Morris, Franklin L., Burbank
Polcuch, Oscar W., Los Angeles
Reinhart, Howard B., Sherman Oaks
Saunders, James Richard, Menlo Park
Schwartz, David, Weed
Toshiyuki, John Y., Los Angeles

COLORADO

Luehrs, W. C., Denver
Omtrock, Frank, Colorado Springs

DISTRICT OF COLUMBIA

Haden James T., Washington
Wenschhof, Donald E., Washington

GEORGIA

Stokes, Homer A., Hawkinsville

IDAHO

Guha, Dipendra S., Pocatello
Leonard, Robert M., Pocatello
Miller, Charles Elmer, Wendell

ILLINOIS

Marlow, R. E., Tamaroa
Roeske, John F. K., North Chicago
Summers, Donald E., Lake Villa
Turley, Robert Milner, Chicago

INDIANA

Albright, A. S., Indianapolis
Kesling, John H., Hammond

KANSAS

Murray, Wilber M., Hutchinson

KENTUCKY

Chapman, Clyde F., Louisville

LOUISIANA

Romano, Joseph J., New Orleans

MAINE

Barker, Lester A., Oakfield
Buxton, Horace C., Fort Fairfield
Pellerin, Lionel A., Lewiston
Welch, H. Leroy, Westbrook

MARYLAND

Freed, Irving, Baltimore
Macek, Frank J., Baltimore
Tennant, Richard W., Baltimore

MASSACHUSETTS

Kramer, Herman, West Somerville

MICHIGAN

Bailey, Harold E., Detroit
Kurz, Frank R., Detroit
Schutte, J. Edward, Grosse Pointe Farms

MINNESOTA

Staples, Vivian, Minneapolis

MISSOURI

Bess, James William, Cape Girardeau
Hente, Donald M., Cape Girardeau
Krummenacher, Ralph K., Maplewood
Spieldoch, T. M., St. Louis

NEBRASKA

Walter, Severin J., Omaha
Wilson, Eugene B., Lincoln

NEW JERSEY

Alswang, Abe, Paterson
DiMaria, Salvatore, Hasbrouck Heights
Gill, Gregory L., Danville
Musto, Genevieve M., North Bergen
Schnayerson, Benjamin, Paterson
Slaughter, Genevieve D., Atlantic City
Taurozzi, Ralph J., West New York
Tiesler, Adolph Edward, Westwood
Vitale, Michael C., Newark

NEW YORK

Aglione, Michael J., Bronx
Bickford, C. F., Brooklyn
Kalaher, Arthur W., Pearl River
Lamonaca, Emanuel D., Brooklyn
Mars, Charles, Brooklyn
Weintraub, Joseph E., Bronx
Williams, Frank B., Utica

NORTH CAROLINA

White, James S., Mebane

OHIO

McCarthy, John C., Cincinnati
Rensing, E. H., Norwood
Rudolph, I. Michael, East Cleveland
Trotter, James M., Lancaster
Watts, Edward N., East Cleveland

PENNSYLVANIA

Flint, F. C., Washington
Friedman, Jacob, Philadelphia
Pratt, Harry J., Philadelphia
Ruel, Yvon J., Philadelphia
Yorke, Edward J., Wayne

TEXAS

Tiller, Lawrence C., Dallas

UTAH

Gordon, G. E., Park City

VIRGINIA

Dixon, L. J., Hampton

WISCONSIN

Berg, George J., Milwaukee
Buchter, John A., Milwaukee
Iken, Justin F. W., Racine
Morgan, William D., Elkorn
Peterson, Alfred, Menasha
Schutkin, Joseph M., Milwaukee
Shipman, John K., Kenosha

FOREIGN COUNTRIES

Aramburu, Alejo, Vizcaya, Spain
Asquith, Mary E., Kitchener, Ontario, Canada
Brunetti, Glauco E., Caracas, Venezuela
Erdos, Jose, Mexico, D. F.
Fontoura, Candido, Sao Paulo, Brazil
Liberalli, Carolos H. R., Sao Paulo, Brazil
Ortiz, Raul, Mexico, D. F.
Varela, Octavio A., Managua, Nicaragua

U. S. POSSESSIONS

Montanez, Mercedes Rios, Puerto Rico

Deceased Members

Anderson, William C. (a life member), Keyport, N. J., died Sept. 3, 1947
Harney, Frank L., Portland Ore.
Krancer, John J., Watertown, Mass., died Aug. 10, 1947
Ladakis, Traintaphyllo (a life member), Beirut, Lebanon
McGinnis, Frank S., Pittsburgh, Pa., died Sept. 2, 1947
McNulty, James C. (a life member), Pittsburgh, Pa., died Oct. 10, 1947
Nelson, Hans Albin, Peoria, Ill., died Oct. 7, 1947
Paprocki, John H., Chicago, Ill., died Sept. 29, 1947
Sister M. Marguerite Lord, Danville, Ill., died Oct., 1947
Wayne, Mrs. Teresa B., Dorchester, Mass.
Wirth, Elmer H. (a life member), Chicago, Ill., died Sept. 26, 1947
Wulling, Frederick John (a life member), Minneapolis, Minn., died Oct. 21, 1947

1947 In Review

. . . . . .from p. 23

Tristeza or "quick decline," disease of orange and grapefruit trees, was found due to a filtrable virus; in South America and Australia the disease spreads more rapidly from tree to tree than in California.

Weed-killing chemical, 2,4-D, was found to kill plants by robbing them of ability to utilize oxygen in their life processes; onion juice mixed with 2,4-D boosted its weed-killing capacity from 10- to 20-fold; ultraviolet radiation changed its herbicidal power.

HET, a new insecticide, killed red spiders and red mites; methoxychlor, close chemical relative of DDT, was reported only one-fortieth as poisonous to man and warm-blooded animals; benzene hexachloride, British insecticide, before killing, deprived single-celled animals of their power to divide; bladin, German-produced insecticide, was tested as a DDT supplement.

Radioactive tracer atoms were used to chart accurately the course of one of the new plant-killing chemicals from the spot where a small quantity is placed on a bean leaf, down the stem and throughout the rest of the plant.

Sugar formed in one leaf of a large sugar-cane plant during one hour's work in the sun was distributed to all parts of the 11-foot, seven-pound stalk within three days, it was shown by use of carbon atoms tagged with radioactivity.

Oxygen absorbed by a plant along with carbon dioxide becomes part of the plant structure while oxygen that goes in as part of water is excess and comes out again as pure oxygen. This was demonstrated through use of heavy oxygen, atomic weight 18.

RESEARCH WITH RADIOACTIVE TRACERS

By use of radioactive carbon 14 it was discovered that carbon atoms do not linger long in the simple acids and sugars into which they are first built by green plants, but within the first hour are to be found in the more elaborate molecules of cellulose, lignins, carotinoid pigments, amino acids and proteins.

Radioactive "tag" was given to tobacco mosaic, disease-causing virus, by inoculating the virus into tobacco seedlings which were then fed with radioactive phosphorus as part of their mineral nutrient solution.

Early history of copper in the bodies of cattle was studied by the radioactive tracer method, which revealed that the heaviest concentration is in the liver.

Fertilizer needs of plants were studied with radioactive phosphorus.

Chlorophyll, green plant pigment that lays the foundation of all foods, was found through use of radioactive carbon of atomic weight 14 to do its work in a two-stage process, one stage being carried on in the dark.

Chromosomes were successfully photographed during 1948 by using an electron microscope.

An enzyme, phosphoprotein phosphatase, was discovered which liberates phosphorus from protein in the eggs of frogs so that the embryo can use the phosphorus in its development

Cells do all their growing in the immediate neighborhood of their nuclei, then the new-grown living substance migrates to the outside of the cell, study of nerve fibers indicated.

British-originated chemical, isopropyl-*N*-phenyl carbamate (IPC), proved successful in conquering quackgrass.

DDT stopped the powder-post beetle that damages bamboo and killed the bark beetle that carries elm disease fungus; it protected fruit against damaging insects.

Rubber trees immune to destructive leaf-spot disease were introduced into cultivation.

Announcement was made of a strain of chickens genetically resistant to range paralysis, destructive virus disease.

Minute virus particle was found to kill a bacterium by stealing its phosphorus.

BACTERIAL RESISTANCE THROUGH MUTATION

Bacterial strains that resist action of penicillin, streptomycin and other antibiotics were shown to result from rapid evolution or mutation, and not merely from a survival of the toughest or selection of resistant cells already there.

Infant orchid plants that grow but never grow up were produced by "doping" them with barbiturate drugs.

Better yields of turpentine and rosin were obtained by inoculating pine trees with spores of a disease fungus when they are tapped.

Podophyllin, resin extracted from rootstocks of mayapple, was found to have the colchicine-like effect of stopping cell division halfway and thereby producing giant varieties of plants.

Too little sleep for too many nights was discovered to retard the growth of white rats and make them highly irritable, but not to impair their ability to learn.

Evolutionary jumps or mutations in mice were produced by methylcholanthrene.

Eelgrass, chief food of many coastwise wildfowl, was reported to be increasing rapidly after almost being exterminated fifteen years ago by a fungus disease.

Living pines of a supposedly extinct species were found to be natural hybrids.

Redwood trees identical with fossil remains of an ancient redwood genus that once grew in the entire northern hemisphere were discovered in central China.

Blood bank for valuable horses, cows and dogs was opened.

Living organisms, viruses and vitamins were sealed in carefully labelled glass tubes to be opened

for research purposes two centuries from now.

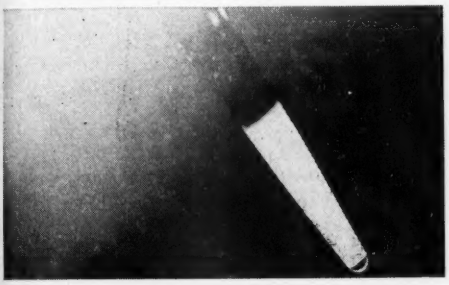
Army's soilless gardens produced millions of pounds of vegetables in Japan.

Treatment of seeds with solutions of salts of radioactive elements, and use of such salts along with fertilizer in the soil, was claimed to cause increased yields.

Birds have a state resembling hibernation, observations of many scientifically trained persons indicated.

CHEMISTRY AND PHYSICS

FIBROUS protein molecules, as complex as those in the human body and other living structures, were synthesized, and protein molecules were induced to join one to another in long chains in much the same way that hydrocarbon molecules polymerize to form synthetic rubber.



Curium, heaviest and most violently radioactive of the elements, was seen by the human eye for the first time. The picture of curium shown above was photographed in a dark room by visible light given off by curium itself. The black shadow at the bottom is the solid tip of a hollow glass needle in which the curium was contained.

Radio tube the size of a rice grain was developed.

Transparent plastic, known as NBS casting resin, was announced as war-developed to shield delicate tubes and circuits without interfering with operation of electronic equipment.

Neutral meson, subatomic particle that lives but one ten-quadrillionth of a second after creation by bombardment from outer space, was declared to play a major role in the creation of cosmic rays.

Cosmic rays were found constantly to create radioactive carbon, present in living organisms and in recently dead organic matter; sensitive radar was used to detect electrical bursts from energetic cosmic rays.

Diamonds, size-for-size, were found to be a thousand times more sensitive detectors of alpha, beta and gamma rays than the ordinary counters used.

Synthetic stones, far more brilliant under electric light than in daylight, were made from titanium oxide.

Gem stones were given the color of more valuable stones through X-ray treatment, but heat or sunlight brought them back to their normal color.

Light was utilized to turn petroleum compounds into synthetic rubber, vapors of such metals as zinc, cadmium and mercury being used as catalysts.

Nylon plastic was synthesized from corncobs and oat hulls instead of coal, air and water.

Synthetic compounds with much the same effects on bacteria and fungi as natural antibiotics were created; the most powerful, acrylophenone, has drawback of being only slightly soluble in water and closely related to another compound highly poisonous to animals.

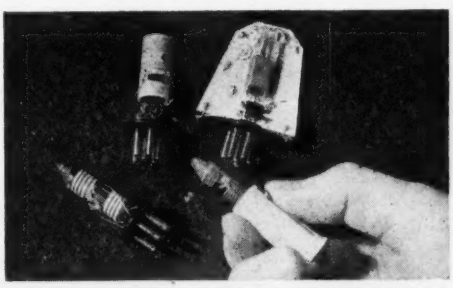
Tyrosine, one of the amino acids, was synthesized with radioactive carbon; radioactive tyrosine may disclose why potatoes and apples turn black and help solve some of the mysteries of "black" cancers.

A new chemical, lithium aluminum hydride, was revealed as a reducing agent for highly stable organic compounds.

Process for making it possible to handle gasoline as a solid was reported to have been developed.

Sound issued by an ultrasonic siren and too high-pitched for the human ear to hear was found to contain enough heat energy to light a pipe, pop corn or kill a mouse.

Nobel prize in physics was awarded Sir Edward Appleton of Britain's Department of Scientific and Industrial Research for pioneer work on the ionosphere; Sir Robert Robinson of Oxford University won the chemistry award for research on alkaloids.



Miniature radio transmitting stations the size of a lipstick case were announced as a further development of the wartime proximity fuze. The four transmitters shown in the photograph above are complete except for miniature microphone and batteries of the hearing-aid type. Circuits of metallic printing, instead of the conventional wiring, are used.

PSYCHOLOGY AND PSYCHIATRY

PENTOTHAL, hypnotizing drug that helped soldiers recover from combat-induced mental sickness, was used for rapid relief of a civilian with claustrophobia.

New, safer form of electric shock treatment in which each pulse lasts only one-half to one-thousandth of a second was successful against depression; shock by weak electrical current followed by a deep, dreamlike sleep was found useful.

Two personality tests, Rorschach ink-blot test and Minnesota Multiphasic Personality Inventory, were used to separate quickly curable mental patients from resistant ones.

Lack of sleep for five days and nights made a healthy young man temporarily "see things," laugh and talk crazily, and show other symptoms of the serious mental disease, schizophrenia, pointing to a relation between the two conditions.

Mental patients were found to have an average intelligence quotient eight points below the normal expectancy of 100; alcoholics and neurotics rated highest intellectually, epileptics and syphilitics among the lowest.

Inability to form new conditioned reflexes was used as a clue to serious brain damage, and to distinguish between functional disturbances and organic disturbances.

After administration of glutamic acid it was found that the I.Q. of subnormal children was often increased.

The chemical constitution inherited from your parents plus the environment in which you live were reported to determine whether you might become an alcoholic; alcoholic addicts were declared subconsciously to enjoy being treated badly.

Smell is not a chemical sense but is due to infrared radiation from the sense organ, according to a theory apparently confirmed by experiments; odorous substances are those capable of absorbing radiation of the critical wavelengths—eight to 14 microns.

Tapping of electric currents from the eye itself was found to be an objective method for measuring visual sensitivity uncomplicated by what happens in the brain's visual centers.

Possibility that sounds may be used to produce an illusion of sight for the purpose of guiding a pilot into an airport was the outcome of war research.

An auditory afterimage was found to follow a buzzing sound of high intensity, causing familiar sounds to have a strange metallic quality.

A person's ear was reported to be more sensitive to interruptions in sound than his eye to a flicker in light, being capable of noticing the difference between a continuous noise and one interrupted 1000 times per second; this research is important in new telephone systems.

Sight, except for responses to light, must be learned, it was shown through studies with baby chimpanzees raised in darkness and humans born blind in whom sight was restored.

Master hearing aid that will suit almost all deafened persons was made possible by war research on noise and communications.

Learning under intense pressure tends to be narrow and rigid so that a need to adapt under changed conditions results in frustration; this finding from animal experiments is believed to explain certain psychological difficulties of men and nations.

Most accurate prediction of a man's leadership comes from the men who work with him, it was found, since intelligence, mechanical aptitude and personality tests failed to predict ability to command in combat.

Lefthandedness can be predicted while the person is still a baby from study of his posture in motion pictures made at monthly intervals, it was reported.

People begin to lose their strength at the age of 25, measurements of hand strength showed.

Although school books intended to build a child's vocabulary only introduce about 500 new words a year, the average child was found to add 5000 new words to his vocabulary every year.

NUCLEAR PHYSICS AND ATOMIC POWER

PROTONS and neutrons were found capable of turning one into the other through exchange of the identifying electrical charge.

Isotope of element 87, francium, was found to turn into astatine, another rare element, after existing only five minutes; neutron bombardment of hafnium produced a new isotope of that element with a half-life period of ten minutes.

Fission, originally confined to heaviest elements, was caused in atomic nuclei as light as tantalum, element 73, by ultra-high energy atomic bullets fired by a giant cyclotron; nuclei of platinum, lead, bismuth and thallium were also split.

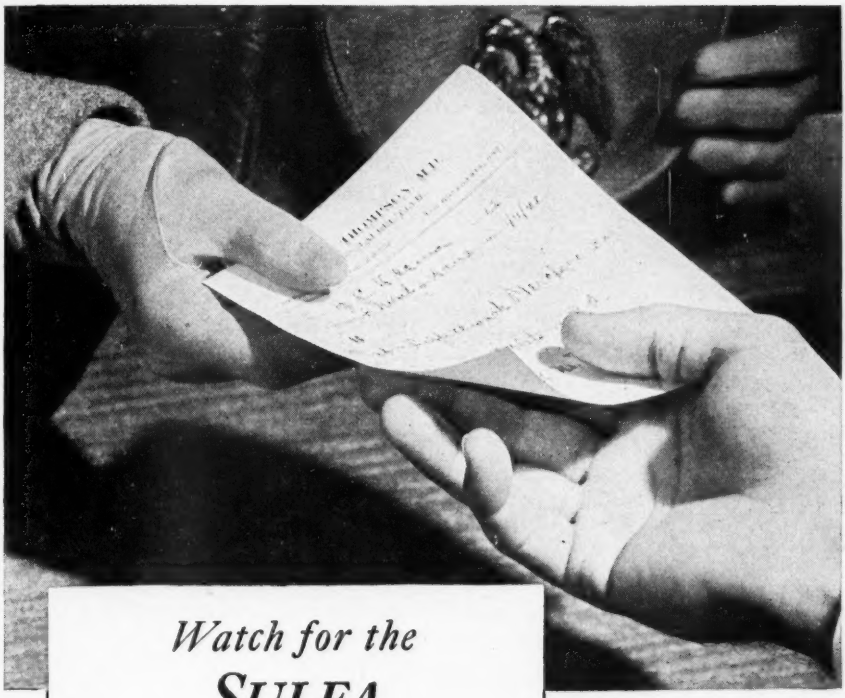
Thirty-four different elements were detected among the fission products of atomic-bomb uranium; neodymium, barium, zirconium and molybdenum were found to account for nearly half of the weight of the uranium split asunder.

Elements were transmuted 16 steps down the periodic table and 22, possibly 30, particles were knocked out of an atomic nucleus with the new 4000-ton synchrocyclotron.

An apparatus which turns the nucleus of an atom into a miniature "radio transmitter" to send out a signal that identifies the chemical element was developed on an experimental scale.

Atomic energy pile using plutonium without a moderator, activated by fast neutrons, was devised to release energy slowly.

Bevatron, atom smasher that can speed up elec-



Watch for the SULFA *Prescriptions this month*

JANUARY 1941

			1	2	3	
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

Now is the time to inventory your prescription sulfonamides —because the chances are that you will be needing ample stocks these days when physicians will be treating increasing numbers of upper respiratory tract infections.

Sulfathiazole Merck USP is white and quite odorless, ideal for suspensions and powder mixtures. As with all Merck Prescription Chemicals, Merck sulfonamides are produced and packaged under the most complete and rigid controls that have ever been devised. This means a great deal to your reputation as a pharmacist.

MERCK PRESCRIPTION CHEMICALS

MERCK & CO., Inc. *Manufacturing Chemists* RAHWAY, N. J.

In Canada: MERCK & CO., Ltd. Montreal, Que.

MERCK MERCK MERCK

A Guaranty of Purity and Reliability

trons to a billion electron volts, has been designed.

Photograph was taken of an elusive subatomic particle, the mesotron, that lived only a fraction of a second and then disintegrated; the mesotron is 200 times as massive as the electron, and the neutral particle resulting from its disintegration has a mass 50 to 60 times that of the electron.

Three of the four unnamed chemical elements were christened: 43, first artificially made element, is called technetium (Tc), 85 is given the title of astatine (At); 87 is named francium (Fr); 61, known as illinium, is being investigated to determine whether that obtained from the atomic pile is identical with the naturally occurring element announced two decades ago.

Long-life radioactive iodine was produced by bombarding the chemical element tellurium.

Improved method of separating carbon of atomic weight 13, useful in medical, biological and industrial research, consists of distilling carbon monoxide over a large-area column into liquid nitrogen as a cooler.

Visible light was found to be given off by moving electrons in a 70,000,000-volt synchrotron, and the electron beam was made visible by its own light.

Radioactive chemical elements manufactured in the uranium chain-reacting pile were made available to international scientists for medical and biological research.

Government-owned centers were established for atomic research and training, particularly to find peacetime applications of atomic energy.

Chlorine, common salt element, was changed by exposure to neutrons in the atomic pile to a radioactive form which will continue to give off radiation for more than a million years.

FIRST SUPPLEMENT ISSUED TO NATIONAL FORMULARY

The First Supplement to National Formulary VIII has been published by the AMERICAN PHARMACEUTICAL ASSOCIATION. The 24-page booklet includes revised monographs, authorized replacements still necessary for a few formulas, corrections to the original text of the new N. F., and several new monographs. The latter are for Amaranth Solution, Compound; Iron and Strychnine Elixir; Iron and Strychnine Phosphates Elixir; and Isopropyl Alcohol.

Active members of the AMERICAN PHARMACEUTICAL ASSOCIATION have received the Supplement directly by mail as part of the A. PH. A.'s service to members. Others may obtain a copy by writing to the AMERICAN PHARMACEUTICAL ASSOCIATION, 2215 Constitution Ave., N. W., Washington 7, D. C. Owners of the N. F. should state the serial number of their copy, which is found in the front of the book, when requesting the Supplement.

ASSOCIATIONS

American Medical Association receives the 1947 Scientific Award of the American Pharmaceutical Manufacturers Association for its fundamental contributions to public health in the field of medical research. Award ceremonies on December 16 included important papers on progress in research.

Pharmaceutical librarians are now organized as a Pharmaceutical Division in the Science Technology Group of the Special Libraries Association. The Division serves those active in library work in pharmacy schools, pharmaceutical corporations and organizations, and those in library research and statistical work in this field. Librarian Alberta Brown of Upjohn is the first chairman.

No pharmacist can provide a physician, dentist or veterinarian with prescription blanks bearing a pharmacist's or pharmacy's name under regulation by the Connecticut State Pharmacy Commission, according to a report from Secretary Alice-Esther Garvin of the Connecticut Pharmaceutical Association.

Dr. Austin Smith, secretary of the A. M. A. Council on Pharmacy and Chemistry, addressed the November meeting of the Connecticut Association for the Advancement of Professional Pharmacy on therapeutic evaluation of drugs. Program and discussion were directed by John J. Dugan, practicing pharmacist and member of the U. S. P. Revision Committee.

COLLEGES

A portrait of Dr. Wortley F. Rudd, former dean of the School of Pharmacy of the Medical College of Virginia, has been presented to the School by the Richmond Retail Druggists Association.

University of Illinois Graduate School sets up four research fellowships in the fields of medicine, dentistry and pharmacy. Fellows in these posts must have not less than eight years of education beyond high school.

Dr. Noel E. Foss, pharmacist and chemist, is now assistant dean at the University of Illinois College of

Pharmacy. Dr. Foss holds advanced degrees in pharmacy and chemistry and is a member of the A. PH. A. He came to Illinois from Calco, and during the war was attached to the Army's Medical Purchasing Office.

Dr. Paul A. Mattis, professor of pharmacology at the Western Reserve University School of Pharmacy and assistant professor in the School of Medicine, will conduct research on radioactive substances under grant from U. S. Atomic Commission. Dr. Mattis was formerly associated with University of Florida School of Pharmacy and Sharp & Dohme.

Dr. Paul J. Jannke has become chairman of the pharmacy and pharmaceutical chemistry department at the University of Nebraska School of Pharmacy. He succeeds Dr. Joseph B. Burt, who is now dean of the School. Dr. Jannke received the 1945 Ebert prize of the AMERICAN PHARMACEUTICAL ASSOCIATION for research on sodium morrhuate.

HOSPITAL PHARMACY

Hans S. Hansen, past chairman of the American Society of Hospital Pharmacists, becomes administrator of Grant Hospital, Chicago, where he has been serving as chief pharmacist.

The New Jersey Society of Hospital Pharmacists will install the following officers on January 15: Albert W. Moore, president; Anna C. Richard, vice-president; Gabriel C. Roberto, secretary; and George A. Lill, treasurer.

A joint meeting of the Maryland Association of Hospital Pharmacists and the Maryland-District of Columbia Hospital Association was held in November.

PHARMACEUTICAL MANUFACTURERS

Decision of the Seventh U. S. Circuit Court of Appeals points up need for private-label distributors to have assurance that products prepared for them by a manufacturer comply with Federal Food, Drug and Cosmetic Act. Distributors have obligation to either check products themselves or obtain guaranty of compliance from private-label manufacturer as provided by Section 303(c)(2). An own-brand distributor was held criminally liable for introduction of an adulterated cosmetic into interstate commerce by the manufacturer. Deleterious gum had been substituted for shellac in the formula without the knowledge of defendant.

E. R. Squibb and Sons is sponsoring a series of Inter-American visits to promote exchange of research techniques and medical knowledge between North and Latin America. Experience to date accents language barrier as factor in retarding hemispheric solidarity in health professions.

Better service for pharmacists as well as a higher degree of interdepartmental teamwork is predicted by Burroughs Wellcome through transfer of business divisions to Tuckahoe, N. Y., where production and research are located.

Three-year expansion program for Baybank Pharmaceuticals is now well under way, as prescription products division of Chesebrough. Vaseline Sterile Petrolatum Gauze Dressings, originally developed for armed forces during war, will be second product of the new line.

Final hearing expected soon following temporary injunction against Burrell and Neidig, Inc., concerning use of Heyden trade secrets on manufacture of formaldehyde and derivatives.

Extensive research in Rh field reported at Ortho Pharmaceutical Corp. under Serologist Philip Levine. Firm was first on market with highly accurate diagnostic anti-Rh serum to determine whether a person has Rh negative or positive blood.

Further clinical trials are under way with Lederle derivatives of folic acid as a nutritional approach to the problem of cancer. These synthetics, pteroyl diglutamic acid (Diopterin) and pteroyl triglutamic acid (Teropterin), have aroused interest as a promising new field of cancer research, not as a "cancer cure." Other Lederle synthetics of this type are also being produced experimentally.

Lederle researchers have come up with what they call the "first organic, non-metallic, essentially nontoxic compound which produces a very marked effect against many parasites, including filariae, in experimental animals when given by mouth." This compound, 1 - diethylcarbamyl - 4 - methylpiperazine hydrochloride, or 84-L, thus holds hope of combating the tropical disease filariasis. Research in Puerto Rico indicates it may be effective against trichinella.

Clinical trials are being completed on Pfizer's procaine penicillin, which the firm expects will warrant general distribution of the product. It is a crystalline water-insoluble salt of procaine and penicillin designed as an improved method of delaying absorption of intramuscular penicillin.

AT RANDOM

Dr. Justin L. Powers, of the A. PH. A. staff and chairman of the N. F. Committee, will serve on National Research Council's Committee on Purity of Chemical Products in the Division of Chemistry and Chemical Technology.

Fred J. Stock, vice-president of Charles Pfizer & Co. and A. PH. A. member, now heads Drug, Chemical and Allied Trades Section of the New York Board of Trade. Robert B. Magnus of Magnus, Mabee & Reynard is vice-chairman.

W. A. Eilbracht closed his pharmacy in Waterloo, Ill., after practicing there for sixty-seven years. He opened the establishment on Main St. at the age of twenty, following graduation from the St. Louis College of Pharmacy, and retired at eighty-seven.

Maj. Gen. Paul R. Hawley, retiring medical director of the Veterans Administration, receives the 1947 Gorgas Medal for his outstanding achievement in reorganizing and directing the VA Medical Division. The award, sponsored annually by Wyeth, Inc., is made by the Association of Military Surgeons.

Intensive research into heart disease and a limited research program on the use of radioisotopes in diagnosis and therapy have been inaugurated by the Veterans Administration.

U. S. Department of Agriculture says that North Central and Southern farm families increased their expenditures for toiletries by 88% between 1941 and 1945—most of this due to expanded purchasing rather than price increases.

A special freight car loaded with 16 tons of medical supplies was added to the "Friendship Train" at Los Angeles, a gift from the nation's Rexall pharmacists as their part in this project for overseas aid.

NARCOTIC PRESCRIPTION RECORD SIMPLIFIED BY RUBBER STAMP

An inexpensive rubber stamp has been recommended and made available to its members by the New York State Pharmaceutical Association for use on narcotic prescriptions. The stamp is intended to remind pharmacists of, and simplify compliance with, the legal requirement that each prescription bear the date of compounding and signature of the dispenser.

Since a number of other state narcotic laws include the same requirement, the form of the $1^1/_2$ by $1^1/_4$-inch stamp is reproduced below:

This ℞ Compounded
Date.....
By.....
Licensed Pharmacist
N. Y. No.....

Use of the rubber stamp has been promoted by the New York Bureau of Narcotic Control. Some pharmacists have now adopted the practice of using it on all prescriptions whether or not they are narcotics.

MONTHLY DRUG INDEX

Adanon hydrochloride (methadon)..... 6
Amino-vibex..... 6
Aromatic elixir, modified..... 24
Cremodiazine; Cremomerazine..... 6
Dermesthetic ointment..... 6
Dienestrol..... 6
Diopterin; Triopterin..... 63
Iron and folic acid..... 8
Kwell..... 8
Mucotin..... 8
Narakon..... 8
Oreton-M (methyltestosterone)..... 8
Penicillin calcium tablets..... 8
Penicillin troches..... 8
Rutaminal..... 11
Staticin (caronamide)..... 11
Topacide..... 11

Best Wishes for the New Year
from your
A. Ph. A. Officers and Staff

ADVERTISING INDEX

Calpurate (Maltbie Chemical Co.)..... 4
Celestins Vichy (Browne Vintners Co., Inc.)..... 10
Combisul (Schering Corp.)..... 7
Dayamin (Abbott Laboratories).....inside front
Dermesthetic Ointment (Cutter Laboratories). 13
Eli Lilly and Co..... 14
Etamon Chloride (Parke, Davis & Co.)..... 3
Iodine Educational Bureau, Inc..... 12
Meonine (Wyeth, Inc.).....
Owens-Illinois Glass Co..... 95
Penicillin in Oil and Wax (C.S.C. Pharmaceuticals)..... 2
Penicillin Sodium, Crystalline (Heyden Chemical Corp.)..... 55
Philadelphia College of Pharmacy and Science.. 61
Pluraxin with Folic Acid (Winthrop-Stearns, Inc.)..... 1
Privine (Ciba Pharmaceutical Products, Inc.) .....inside back
Sulfonamides (Merck & Co.)..... 61
Thantis Lozenges (Hynson, Westcott & Dunning).....outside back

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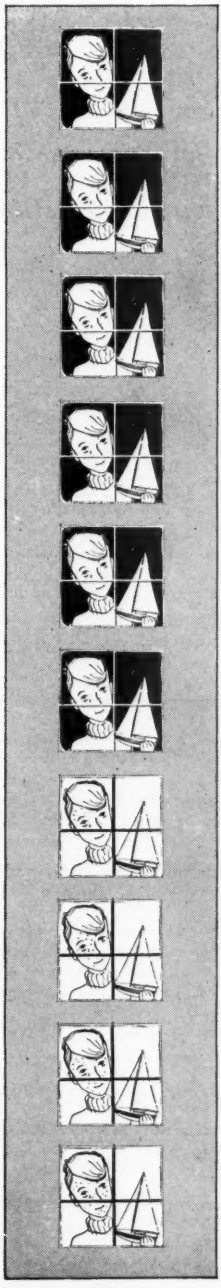
Interesting and successful careers in Pharmacy, Chemistry, Biology or Bacteriology open to young men and women following courses of study in these fields leading to B.Sc., M.Sc. and D.Sc. degrees. Applications being considered now for Sept. 1948 and 1949. Write for catalog.



6 OUT OF EVERY 10 MEASLES CASES WILL OCCUR IN THE NEXT 3 MONTHS!

ARE YOU READY?

All you need by way of proof that measles are upon you is the significant 10-year graph below!

And all you really need to meet the emergency is—plenty of Immune Serum Globulin, Cutter—to make measles easier on everyone concerned. Fractionated from normal human plasma pooled from fresh venous whole blood, Immune Serum Globulin offers these particular advantages for the prevention or modification of measles:

160 mgm. gamma globulin per cc.

In measles serum, it's the concentration of gamma globulin that counts. The known and constant potency of Immune Serum Globulin, Cutter, permits low volume, adjustable dosage.

Contains no placental material

Immune Serum Globulin, Cutter, causes no side reactions, is non-pyrogenic. Easily recognizable—it is water clear; hemolysis-free.

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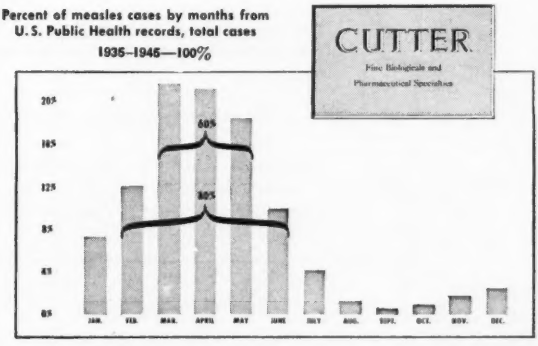

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These ampoules of

THEELIN

permit adjustment of dosage

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PUBLISHED by the American Pharmaceutical Association. Publication office: 20th and Northampton Streets, Easton, Pa. Editorial office (and address for all correspondence): 2215 Constitution Ave., N. W., Washington 7, D. C.

ANNUAL SUBSCRIPTION—Journal of the American Pharmaceutical Association, complete (both editions): United States and Pan America $7; Canada $7.70; other foreign $8; members of the American Pharmaceutical Association with dues, $4. Each edition, Scientific Edition or Practical Pharmacy Edition: United States and Pan America $4; Canada $4.35; other foreign $4.50. Single numbers, either edition: United States and Pan America $0.35; Canada $0.40; other foreign $0.50.

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ENTERED as second-class matter January 23, 1917, at the Post Office at Easton, Pennsylvania, under the act of March 3, 1879, as 24 times a year: Scientific Edition monthly on the 5th; Practical Pharmacy Edition monthly on the 20th. Acceptance for mailing at a special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized July 10, 1918.

CALPURATE
Calcium Theobromine
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Tablets 7½ gr. (100's) and powder (1 oz.)

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Better Medicines through Research
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New prescription products

Product descriptions may be clipped and filed on three- by five-inch cards. These are also indexed for quick reference in the "Monthly Drug Index" appearing on the last page of each issue. A product is described in this column for the information of pharmacists who may be asked by physicians to stock the drug, or who may receive professional inquiries about it. A listing does not imply evaluation or recommendation by the Association, nor does omission of any product have significance concerning its merit.

ACNOMEL

Description: Resorcinol, 2%; sulfur, 8%; in a stable, grease-free, scented, flesh-tinted hydrosol base.

Form supplied: Tubes of 1½ oz.

Use: In conditions where the antiseptic and astringent action of resorcinol with the antiseptic and mild irritant action of sulfur are indicated.

Administration: Topically, one application daily, or oftener as directed. Acnomel should not be applied to diffuse acutely inflamed areas and should be used with care near the eyes. In blonde or dry-skinned persons, excessive erythema and scaling may sometimes require withdrawal of drug.

Source: Smith, Kline & French Laboratories, Philadelphia, Pa.

DEKA

Description: An exempt narcotic containing in each fluidounce codeine sulfate 64 mg., calcium iodide 0.13 Gm., chloroform 0.13 Gm. with wild cherry, tolu, squill, yerba santa, citric acid and menthol.

Form supplied: Aromatic liquid in bottles of 2, 4 and 16 fluidounces and 1 gallon.

Use: Sedative-expectorant intended for use in cases of non-productive cough other than that from tuberculosis.

Administrat on: Orally in doses of 1 or 2 teaspoonfuls for adults; ½ or 1 teaspoonful for children. Deka may be taken 3 or 4 times daily.

Source: Winthrop-Stearns, Inc., New York 13.

ETAMON CHLORIDE

Description: Tetraethyl ammonium chloride, in sterile solution.

Form supplied: Solution in 20 cc., multiple-dose, rubber-diaphragm-capped vials. Each cc. contains 0.1 Gm.

Use: Interrupts normal transmission of autonomic impulses which relaxes nerve-induced constriction of peripheral blood vessels. Intended for re-establishing blood flow in diseases involving restricted circulation to the extremities.

Source: Parke, Davis & Co., Detroit 32, Mich.

ETHINYL ESTRADIOL

Description: Synthetic estrogenic derivative of alpha-estradiol, U. S. P.

Form supplied: Tablets of 0.02 and 0.05 mg. in bottles of 100 and 250.

Use: Intended for use in conditions that respond to estrogenic therapy.

Administration: Orally. Dosage varies widely according to indication. Suggested dosage: menopausal syndrome 0.05 mg. daily; suppression of lactation 1.5–2.5 mg. daily for three days; functional bleeding 0.3 mg. daily for 20 days with 5 mg. progesterone intramuscularly daily, 16th–20th day; hypogonadism 0.05–0.5 mg. daily; prostatic carcinoma 0.25–0.5 mg. daily, with dosage gradually reduced.

Source: Ciba Pharmaceutical Products, Inc., Summit, N. J.

LUTOCYLOL LINGUETS

Description: Anhydrohydroxyprogesterone, corpus luteum hormone.

Form supplied: Compressed ovoid tablets designed for direct absorption through the oral mucosa; 10 mg. each, in bottles of 30 and 100.

Use: Intended for use in conditions that respond to progesterone.

Administration: Orally. The linguet is placed in the pouch between the molar teeth and the cheek until complete absorption occurs (approximately forty-five minutes). The physician may vary the dosage widely according to the indication. *Caution:*

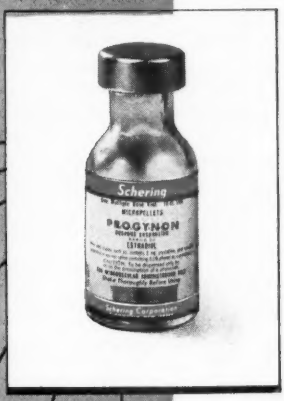
(*Continued page 72*)

Announcing

MICROPELLETS PROGYNON

(aqueous suspension, alpha-estradiol)

a new departure in estrogen therapy



MICROPELLETS PROGYNON provide a unique and completely new technic for parenteral administration of pure alpha-estradiol. For the first time it has become possible to suspend the primary follicular hormone in the form of MICROPELLETS in normal saline. Prolonged and constant absorption from a semi-permanent depot is established in the tissues by a simple intramuscular injection. Where injections of an oil solution are not feasible or desirable, a single injection of 1 mg. of MICROPELLETS PROGYNON may be substituted in order to achieve prolonged control.

MICROPELLETS PROGYNON offer economy in estrogen therapy while providing the complete safety and freedom from side effects inherent in natural hormones.

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MICROPELLETS PROGYNON

SCHERING

(*Continued from page 70*)

Withdrawal bleeding may be caused when a high dosage schedule is terminated abruptly.

Source: Ciba Pharmaceutical Products, Inc., Summit, N. J.

LYNORAL ELIXIR

Description: A flavored elixir containing 0.03 mg. of ethinyl estradiol in each teaspoonful.

Form supplied: Elixir in bottles of 4 oz. and 1 pt.

Use: Intended for use in conditions that respond to estrogen therapy.

Administration: Orally. In most menopausal cases, treatment is begun with 1 teaspoonful twice a day; in severe cases, the physician may increase the dosage to 3 to 5 teaspoonfuls a day. For maintenance therapy, 1 teaspoonful a day is said to be usually sufficient.

Source: Roche-Organon Inc., Roche Park, Nutley 10, N. J.

PARABETA

Description: Each capsule contains thiamine hydrochloride (vitamin B_1), 3 mg.; riboflavin (vitamin B_2), 3 mg.; pyridoxine hydrochloride (vitamin B_6), 0.1 mg.; niacinamide, 20 mg.; calcium pantothenate, 3 mg.; other natural factors of the B-complex from 84 mg. of dried liver; ascorbic acid, 50 mg.

Form supplied: Capsules in bottles of 100 and 500.

Use: Intended for use in prophylaxis and treatment of frank and subclinical deficiencies of vitamins B and C.

Administration: Orally, in suggested prophylactic dose of one capsule per day for adults and children (6 to 12 years old). Therapeutic dose as determined by the physician.

Source: Sharp & Dohme, Inc., Philadelphia 1, Pa.

PYRIBENZAMINE OINTMENT AND CREAM

Description: Petrolatum-base ointment and washable cream containing a 2% concentration of tripelennamine hydrochloride, an active antihistaminic agent.

Form supplied: Ointment or cream in jars of 50 Gm. and 1 lb.

Use: Local antihistaminic action to alleviate pruritus and allergic skin manifestations.

Administration: Topical. A light dressing should usually be applied following application of the ointment. *Caution:* Significant systemic absorption may occur if ointment or cream is applied to extensive raw areas. In rare instances a contact type of eczematous allergic reaction may occur.

Source: Ciba Pharmaceutical Products, Inc., Summit, N. J.

SYRUP SEDULON

Description: Each 4 cc. contains 60 mg. Sedulon, a non-narcotic mild sedative.

Form supplied: Syrup in 4-ounce, 1-pint and gallon bottles.

Use: Intended for relief of conditions stimulating the cough reflex.

Administration: Orally, in adults, 1 teaspoonful every 2 hours and 1 tablespoonful at bedtime; in children, 2 to 6 teaspoonfuls per day, depending on age and indication.

Source: Hoffmann-La Roche, Inc., Roche Park, Nutley 10, N. J.

THEELIN IN OIL

Description: Crystalline estrogenic substance from pregnancy urine, in oil.

Form supplied: In rubber-diaphragm-capped Steri-Vials of 10 cc.; each cc. contains 1 mg. (10,000 International Units) of theelin.

Use: Intended for control of menopausal symptoms, natural or artificial, and other conditions associated with a deficiency of estrogens.

Administration: Intramuscularly, in dosage determined by physician.

Source: Parke, Davis & Co., Detroit 32, Mich.

THEPHORIN

Description: Chemically, Thephorin is (2-methyl-9-phenyl-2,3,4,9-)tetrahydro-1-pyridindene hydrogen tartrate.

Form supplied: Tablets, 25 mg., in bottles of 50, 100 and 1000. Syrup, 10 mg. per teaspoonful, in bottles of 4 oz., 1 pt. and 1 gal.

Use: Intended for treatment of allergic disorders. It is said that this antihistamine compound has a low incidence of side reactions and that its use is not likely to cause drowsiness.

Administration: Orally; one to six tablets a day (or 2 to 12 teaspoonfuls of syrup) reported to be usually adequate.

Source: Hoffman-La Roche Inc., Roche Park, Nutley 10, N. J

TOMECTIN

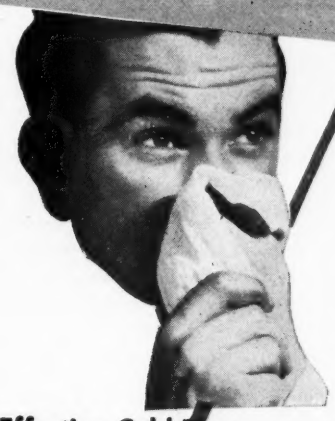
Description: Each gram contains nickel pectinate, 150 mg.; sodium chloride, 50 mg.; and all factors naturally present in dried fresh tomato pulp, 800 mg.

Use: Intended for treatment of simple diarrhea and bacillary dysentery.

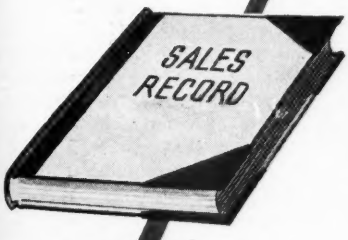
Administration: Orally. Suggested dosage for infants is 1 to 3 teaspoonfuls per formula feeding, or every three hours; for children and adults 1 to 2 heaping tablespoonfuls (6 to 12 Gm.), or more depending on severity of case, every two or three hours or after each bowel movement.

Source: Ayerst, McKenna & Harrison, Ltd., 22 E. 40th St., New York 16.

2 NARAKON Solutions for 2 big PROBLEMS



1 Effective Cold Therapy



2 Increased Sales

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***NARAKON** is the first of a series of distinctive new ethical medicaments to be distributed under the hallmark of "Baybank," exclusively through the regular wholesale and retail trade channels.*

NARAKON Nasal Solution—Plain or with Desoxyephedrine as vasoconstrictor—is "custom-built" for greater flexibility in nasal treatment. **NARAKON** Plain may be safely used for its palliative, detergent, antiseptic action by sinusitis patients and others with chronic upper respiratory affections, or where vasoconstrictors are usually contraindicated. **NARAKON** with Desoxyephedrine (1%) is particularly indicated where prompt decongestion without rebound turgescence and systemic by-effects is desired. Both solutions are aromatized, aqueous and isotonic, slightly acid (pH of 6), and contain the highly efficacious detergent antiseptic, benzalkonium chloride.*

With a nation-wide promotional program already in full swing, **NARAKON** in its two forms is well on its way to becoming an Rx "best-seller". Be sure you're adequately stocked. Order from your wholesaler today.

***Available:** **NARAKON** Solution Plain, or with *dl*-Desoxyephedrine (1%), each in 1-oz. bottles with dropper assembly.*

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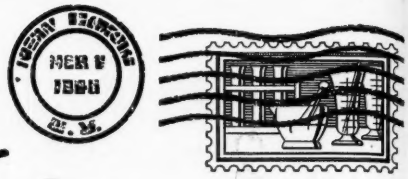

Letters:

Unionization of Pharmacists

Sirs:

In the convention number of the *Practical Pharmacy Edition* I read of the issue that has arisen concerning unionization of pharmacists.

If pharmacists pay tribute to labor leaders to take care of their interests and protection, I dare say that all the education and all professional talk of ethics, etc., will be worth nothing. Such thinking makes me downhearted. Pharmacy graduates should have enough intelligence to be in a position to stand on their own legs and take care of their interests and problems.

Washington, D. C. JOHN S. AUSTERLITZ

Food for Collaborators with Nazis?

Sirs:

This refers to an appeal for food from the "Wiener Apotheker Hauptgremium" published in your "Letters" department (8 : 427, 1947).

When Hitler seized Austria in 1938, about one third of Vienna's pharmacies were in Jewish hands. The National Socialists considered the pharmaceutical profession one of highest responsibility which could not well be entrusted to Jews. Therefore, in the very first days of the occupation Nazi pharmacists, previously slated for this task, took over the Jewish pharmacies by simply entering those places and ordering the owners to leave immediately. No compensation (in some cases just a token compensation) was granted to the legal owners. The assessed value of a pharmacy in Vienna, with its monopolistic way of licensing, ran from approximately $20,000 to $80,000 or more.

These seizures, of course, were performed with the consent, probably also with the active cooperation, of the "Wiener Apotheker Hauptgremium," the official organization of pharmacy owners with compulsory membership The chief of the organization then was the same man who signed the petition mentioned above, W. Heinrich Bartl.

Now the same men who led those seizures ask for mercy in their plight. I have to admit that among these men a number might be found, at closer investigation, who disapproved such actions, but none raised his voice to fight actions of this kind.

(*Continued page 76*)

HEYDEN PENICILLIN PRODUCTS

* No refrigeration required

PACKAGE INFORMATION

PENICILLIN SODIUM—amorphous and crystalline forms: Vials containing 100,000, 200,000, 500,000, and 1,000,000 units.

PENICILLIN IN OIL AND WAX: 100,000, 200,000, and 300,000 units per cc.—5-cc. vials; also, 300,000 units per cc. in 10-cc. vials, and 1-cc. cartridge with needle.

TABLETS PENICILLIN CALCIUM (Buffered): 50,000- and 100,000- unit tablets, individually sealed in aluminum foil. Boxes of 12 and 120.

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Chicago Office: 20 North Wacker Drive
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(*Continued from page 74*)

You would oblige me by bringing this matter to the attention of United States pharmacists, who may judge whether the pharmacists of Vienna deserve help from the States.

New York, N. Y. ARNOLD WOLHEIM

This offers a pharmaceutical example of the general question: Who is deserving of mercy and aid—and who of blame—among those who submitted to the Nazis? It has been debated ever since the war. We therefore asked for a second expression of opinion on Viennese pharmacy under the Nazis from Dr. George Urdang, director of the American Institute of the History of Pharmacy, whose interesting reply appears below.—THE EDITOR

Not a Hero, But..

Sirs:

I am glad that you asked for my comments on Mr. Wolheim's letter. He is undoubtedly right in condemning the seizure of so-called "Non-Aryan" property, (i.e., property owned by Jews and half Jews) including if not even starting with pharmacies in all countries under Nazi domination. There are, in my opinion, only a very few people who will not agree with him.

But just because of our strong stand toward the crimes of Nazism we are all the more obligated not to put the blame on the wrong people. Mr. Wolheim is assuming that "these seizures, of course, were performed with the consent, probably also with the active cooperation, of the 'Wiener Apotheker Hauptgremium,'" the official Viennese organization of pharmacy, headed by "the same man who also signed the petition" concerning food relief.

Since the "Wiener Apotheker Hauptgremium" was officially dissolved on August 25, 1938 (i.e., before the seizures took place), it was "of course" not responsible for the latter. The "Wiener Apotheker Hauptgremium" was replaced by the "Gau Gross-Wien," a subdivision of the "Gau Ostmark" which received its directions from Berlin and had not the slightest possibility of doing anything else but follow orders. Sure, there were many, too many indeed, pharmacists in Austria who jubilantly joined the German Nazis and some even tried to outdo them. But W. Heinrich Bartl was not among them.

It was two other, younger men, Franz Dittrich and Franz Schweder, who did the dirty job of official pharmaceutical Nazism in Austria. There appeared a triumphant article about the new leaders in Austrian pharmacy with pictures of them, mostly in Nazi uniforms, in the *Wiener Pharmazeutische Wochenschrift* of October 15, 1938. As was to be expected, there is no picture or even mention of Mr. Bartl, who had resigned (or was forced to resign) even before the dissolution of the association which he had led in better and more respectable times. The last proclamation of the pre-Nazi "Wiener Hauptgremium" was signed not by Mr. Bartl but by "Franz Schweder, e. h., Gremialvorsteher."

It is true, Mr. Bartl, did not "raise his voice to fight actions" of the Nazis. He was even confirmed in his office as one of the inspectors of Viennese pharmacies and a member of the examination board for pharmaceutical apprentices and given the title (imported from Germany) of "Pharmazierat." The Nazis were in dire need of good men for such positions.

It is admitted, then, that Mr. Bartl has not been a hero. But every emigrant from Nazi-dominated countries may put the question to himself as to what he would have done had he been allowed to continue in his profession without being asked for anything else but acquiescence. I am sure that Mr. Bartl did not take any part in any Nazi crime. I am quite certain that the mere vulgarity of Nazism was repulsive to the old conservative gentleman.

As all of us know, it is not only the people of Austria, or Germany, or Italy, or Poland, or the Balkans, but of the whole of Europe, including the so-called victorious countries, who are in urgent need of help. There is, furthermore and of special urgency, the necessity of quick and sufficient relief and resettlement of the so-called "displaced persons." In my opinion every one of us has to do his or her share, collectively as well as individually. The question, however, whom to help first and/or primarily has to be answered by the presumptive donors themselves, their personal inclination and their conscience. There should be justice. But there should also be mercy—or, should I say, grace?

Director, American Institute of the History of Pharmacy — GEORGE URDANG

We remind interested readers of the address of CARE for ordering personal food contributions to colleagues in Europe: CARE, 50 Broad St., New York 4.

announcing a **new** and **different** cough syrup

syrup Sedulon 'Roche'

effective

palatable

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Pharmacists will be interested in Syrup Sedulon 'Roche' because this new cough syrup is based on a different therapeutic approach. It has a gentle sedative action which is so effective that it often replaces codeine. Clinical experience shows that Syrup Sedulon is particularly valuable for annoying night cough. Since Syrup Sedulon also has a pleasant flavor which appeals to young and old alike, it may be expected to become a major prescription item.

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T. M.—Sedulon—Reg. U. S. Pat. Off. Chemically, Sedulon is 3,3-diethyl-2,4-dioxo-piperidine.

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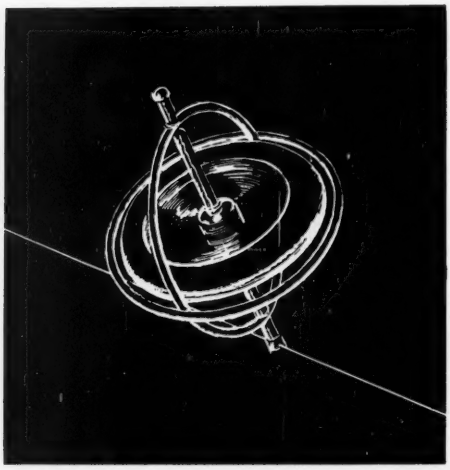

perfect balance

One of the principal objectives of every retail drug store should be a perfect balance between inventory and sales. Merchandise on the shelves is of no value until it is sold. Carrying costs can soon consume every vestige of profit. As book values increase, bank balances go down, and no asset is quite so acceptable as money in the bank.

The most satisfying buying practice is that of buying as needed, in quantities to meet individual needs. Adequate buying is to be encouraged —overbuying condemned. Now is the time to reconcile all purchases to the buying budget, to follow the teachings of the Lilly Policy. Its soundness has been proved by more than half a century of continuous operation.

Lilly ELI LILLY AND COMPANY

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